THE PLANE WITHOUT A PILOT

An
ANDY LANE
Story

EUSTACE L. ADAMS

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THE PLANE WITHOUT A PILOT

THEY SAW A BRIGHT STREAM OF FIRE DART HIGH IN THE AIR.
The Plane Without a Pilot. *Frontispiece.*

THE PLANE WITHOUT A PILOT

BY

EUSTACE L. ADAMS

AUTHOR OF
FIFTEEN DAYS IN THE AIR
THE RUNAWAY AIRSHIP
THE FLYING WINDMILL
PIRATES OF THE AIR, ETC.

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THE PLANE WITHOUT A PILOT

CHAPTER I

"IRON MIKE," PILOT

ANDY LANE glanced through the control room windows at the vast crowd which pressed against the ropes on three sides of the flying field. Then he signaled to the ground crew, who hastily pulled away the blocks from in front of the two great wheels.

"All right, Joe," he said, "let's go!"

Slowly at first, then faster and faster, the huge monoplane trundled across the snow-covered airport, her four powerful Diesel engines leaving stiff blue-gray ribbons of smoke in their wake. Andy, balancing his body against the rolling and bumping, swiftly stepped to a vacant seat beside the

man who was at the control wheel and sat down, staring straight ahead at the trees which marked the end of the take-off.

Now the monoplane's tail had risen. She was roaring along the runway, her fat balloon tires slamming against the hard-packed snow, swaying and careening like an elephant running amuck. Andy's vivid blue eyes swung from the oncoming trees ahead to the lean, bronzed face of Joe Lamson, the pilot. Was the new ship too heavy? Or was Joe holding her down? In another moment he would have to pull her off or cut the engines. The danger line was rushing toward the thundering ship with the speed of an express train.

And then Joe Lamson, with a smile of satisfaction on his face, pulled gently back on the control wheel. With a breath-taking upward swoop the monoplane leaped into the air and began to climb toward the steel-gray clouds with a speed that made Andy Lane's heart beat fast with satisfaction and pride.

"Oh, boy! I knew she'd do it, Joe!" he shouted.

Joe Lamson grinned at the most famous young flyer in the world and nodded contentedly.

"She's all you said she'd be, Andy," he replied. "These new Diesels would fly a battleship!"

"Swing around the field a couple of times," directed the young captain, "to be sure everything's all right. Then, big boy, we'll head for the south and warmer weather."

At a thousand feet the newest of the long line of famous Apex ships plunged into a wet, gray cloud, which painted the double windows of the control room with mist. Andy touched a button on the instrument board and watched the windshield wipers clear away the dampness on the other side of the glass. Then they burst through the cloud and reappeared in the cold, gray sky over the Mineola air field, where, despite the wintry weather, thousands and thou-

sands of people had gathered to watch their national heroes, Andy Lane and his daring crew, take off on another of their wonderful flights.

Except for a soft, purring hum from the engines outside and a muffled drone from a queer-shaped box behind the twin pilots' seats, the control room was in utter silence as Andy stared down at the crowds below. So well had the entire fuselage of the great ship been insulated that neither noise nor cold could enter through its thick walls. Andy's voice, as he spoke to Joe, was scarcely louder than a whisper.

"Guess we might as well set 'Iron Mike,' " he said.

"Sure," nodded Joe. "The ship is running like a clock. Might as well be off."

Andy glanced at a sheet of paper in his hand upon which was marked a course which would take them in a perfectly straight line, for fifteen hundred miles, to a place where the sun shone warmly and it was spring or summer all the year.

"South, by a little west," he muttered to himself, turning a pointer on the odd-shaped box until the dial indicated South-southwest. Then he snapped a switch and turned to Joe. "O.K., old-timer," he said, "let's see how she works."

And then an amazing thing happened. The pilot removed both hands from the control wheel and both feet from the rudder pedals. The great ship was flying alone. Slowly her bow swung around until she pointed S.S.W. There was a very faint click from within the softly whirring box. The bow ceased to turn and remained headed upon exactly the course that Andy had set. More wonderful still, the wintry blasts that pulled and pushed at the ship's great wing seemed to have no effect at all upon her stability. As a puff began to lift her wing there came another soft click from the box. The ailerons moved automatically. The wing dropped to normal and the ship sailed ahead upon an even keel.

Joe sat there, his hands close to the wheel,

his feet near the rudder pedals, watching the remarkable ship flying alone and unaided through the bumpy air.

"You don't have to sit there," laughed Andy; "stand up and walk around the room if you want to. 'Iron Mike's' a better pilot than either of us, except for taking off and landing."

"Maybe so," admitted Joe reluctantly, "but it doesn't come naturally to me to leave the controls when a ship's in the air. It's going to take most of the flight for me to get used to it."

"Well, start getting used to it now," insisted Andy. "Come on, get out of the seat and stand here beside me. The view's wonderful!"

With marked hesitation the veteran pilot eased himself out of his seat and stood beside Andy. His eyes were fixed upon the control wheel as though he did not believe what he saw. It looked as though he was ready, at any moment, to dive into the seat, seize the wheel and twist the great ship out of a tail spin. He glanced out of the win-

dow at the snow-covered expanse of Long Island and at the great stretch of gray water to the left that was the Atlantic Ocean, but he was far more interested in looking at the seat that he had just left.

A door behind the two was opened and a very stout young man, clad in oil-stained coveralls, stepped into the room. His moon-shaped face was wreathed in smiles. His joyous shout nearly cracked the forward windows.

"Whoops, Andy! Off again on a long flight! And the Diesels working like a million dol—" His voice suddenly trailed off into a gasp. "Hey, you birds! Sit down and grab those controls will you?"

"Why, Sam?" laughed Andy. "What's the matter with 'Iron Mike'?"

Sam Allen's eyes went to the odd-shaped box, then to the control-room windows.

"There's nothing the matter with it," he said, "but we're going to be flying straight across New York City in a few minutes and I'd feel a heap easier if one of you smarts were to sit down there and keep your hands

and feet where they belong until the gyroscopes have been running a little longer. I'm a nervous man and think a lot about keeping myself in good health. The idea of those tops ceasing to spin at just the wrong minute is very upsetting. It makes me tremble like the fenders on a collegiate Ford. It would be just my luck to take a nose dive smack down on that pointed flag pole on top of the Chrysler Building. I'm too fat to look dignified stuck up there like an apple on a stick."

"Where's your parachute?" demanded Andy, trying very hard to look stern.

"Hanging up by my cabin door where I can grab it in a hurry," replied Sam.

"Grab it, then, and kiss us all good-by," retorted Andy. "If we'd known that this was one of your nervous days, we'd have suggested that you send one of your assistants along with us as flight engineer."

Sam Allen gave the nineteen-year-old pilot a look of deep disgust.

"Just let me see you leave me behind, Andy Lane!" he snorted. "Just let me

catch you even thinking of it! You know very well that if I went and whispered to those engines out there and told them you were going to leave me behind, there isn't one of them that would turn over another revolution. No, sir, they'd all quit dead on you—just like that!"

He snapped his pudgy, grease-smeared fingers to give force to his arguments and surveyed the instrument board, apparently lost in deepest dejection. In reality, Andy knew, Sam was studying the dials and the indicators, his keen blue eyes recording every detail of the temperatures inside and outside the cabins, the number of engine revolutions per minute, the oil pressure, the quantity of fuel oil in the tanks, and everything else that had to do with the running of the ship and her position in the air. Sam's complaints did not bother Andy. Sam always complained, except when there was real danger. Then the fat man smiled gayly, cracked jokes and displayed a cold, iron-nerved courage that feared neither man, beast, nor the elements themselves.

"Now that we're agreed that you are delighted to have me along," said Sam, calmly, "I'll make the suggestion that we get out of this cold weather as soon as we can. Last time we flew in cold air like this my teeth chattered so I lost four fillings and the Apex Company wouldn't pay the dentist's bill, either."

With that he winked at Andy, turned his broad back and departed through the door that led from the control room into the cabin. Andy and Joe Lamson remained on watch near the controls, ready to spring into their seats if the twin gyroscopes which operated the ship should cease their spinning for even a moment. Both flyers knew that "Iron Mike" could be depended upon, but the habits of years are hard to overcome. Never before, except in smaller test ships, had they turned over full control to the almost human machinery that controlled ailerons, flippers, and rudders, and it was very difficult to just stand there and watch the ship flying upon an even keel, precisely upon her course, without any hu-

man hand directing. From time to time Joe eyed the whirring box within which the gyroscopes revolved as if to make sure in his own mind that the wonderful thing was really there. But there it was, looking, from the outside, as unimportant as any square wooden packing box could look. It seemed impossible that within it was operating a small piece of machinery that might completely change the science of aviation.

"Boy, this is some ship!" Joe murmured. "Diesel engines using heavy oil for fuel instead of gasoline, gyroscopic control using a couple of spinning tops instead of pilots' brains. Next thing you know they'll fix the gyroscopes so they can take the ship off and land her. After that, they'll operate the whole shooting-match from the ground by radio and we pilots will become nurses for air-sick passengers."

Andy, looking ahead at the mountainous sky line of New York, slipped into the pilot's seat, switched off "Iron Mike" and began to fly the ship like an ordinary plane.

Pulling gently back upon the stick, he began to urge the ship upward in a steady climb.

"New York City is one place I like to give plenty of sky room," he explained to his assistant. "These thousand-foot buildings cut the air up into bumps, pockets and whirlpools. It would be a bad place to have something happen to the engines."

At three thousand feet the plane plunged into a thick layer of clouds which made the windows as useless as though they had been painted on the outside. The control room became dark and eerie. Andy snapped on the lights upon the instrument board and began to fly by means of these mechanical indicators, which told him whether or not he was climbing too steeply and whether his wings were level or sagging at an angle. Blind flying was nothing new to Andy and Joe. Hundreds and hundreds of hours they had spent driving giant Apex planes through sleet and snow, hurricane and monsoon, during their record-breaking flights all over the world. Up, up, Andy forced

her, correcting her swerving movements almost automatically, his keen blue eyes darting from one dial to another as they glowed in the darkness before him.

At last the dial of the altimeter indicated that the new *Apex* had reached an altitude of six thousand feet. Clouds still surrounded her. The two silent young men there in the control room might have been all alone in a world of swirling gray fog, a thousand miles from the nearest human being. But it did not occur to either to feel lonely. They were in an Apex ship at the beginning of a new voyage and were far more content than they could ever have been with their feet on solid ground. By climbing another thousand or two feet Andy might have brought his ship up into clear, sparkling air above the clouds. Or by dropping three thousand he might have flown in the gray sky over the city. But such was his faith in his ship that he was perfectly at ease driving her through the darkness of the cloud-fog. While his instruments remained true to their duty and

while the music of the engines was sweet and unbroken, why not fly at the most convenient height, clouds or no clouds?

"Now, 'Iron Mike,' old-timer," he said, "do your stuff."

He leveled the ship in the air, snapped on the switch that cut in the connections to the gyroscopes and took his hands and feet from the controls. The *Apex* plowed ahead through the air just as steadily as though a human brain were directing her. The swiftly spinning tops needed no turn-and-bank indicators to tell them whether the *Apex* was on an even keel or not. They needed no light over the compass to tell them whether she was headed S.S.W. or not. But whenever one wing tip dropped a few inches from level an electric circuit snapped into life and the wing was lifted. And whenever a puff of wind carried the bow a little off her course another circuit became active and twisted the rudder until the bow returned to its arrow-straight course. The elevators, too, were operated by the same instruments, which clicked into

action whenever the bow rose or fell in the uneven air. At exactly six thousand feet and precisely on its course the great ship plunged through the clouds, while Andy and Joe stood there watching in never ending amazement.

"Well," said Andy at last, "there hardly seems need for us to stand here while that do-funny does our work for us. But there's no telling if or when 'Iron Mike' might go sour on us, so I guess it'll be up to us to keep our eyes on it. It's your turn to stand watch, so I'll go back and inspect the cabins."

CHAPTER II

BOUND SOUTH

LEAVING the ever faithful Joe Lamson to watch the ship as she thundered through the wintry clouds over New York and New Jersey, Andy Lane opened the door which led into the main cabins and began his inspection of the newest airplane to bear the world-famous name *Apex*.

As always at the beginning of an important flight in a new ship, Andy was conscious of a tremendous excitement. It all seemed just too good to be true! It seemed hardly possible that he, Andy Lane, was commander of this great plane. Why, it had been no time at all since he had been both poor and unknown, working his way through college and, at night, experimenting with his father upon a new carburetor which they were trying to perfect.[1] It had

[1] See "Fifteen Days in the Air."

been the invention of that carburetor which had been the turning point in Andy's life. In an effort to prove the value of the device he had persuaded Mr. Ronald Avery, president of the then small and unimportant Apex Aeroplane and Motor Corporation, to allow him to make a startling test in the air. He had developed the idea of refueling from another airplane, and, by thus refilling his gas tanks while in mid-flight, had kept the three-motored *Apex No. 1* in the air for fifteen days and nights without ever touching her wheels to the earth. He, Joe Lamson, and Sam Allen, who had been the first of the famous Apex crews, had landed at the end of that thrilling flight to find themselves famous. The reputation that Apex planes and Apex engines had gained during those two weeks in the air had brought orders from the far ends of the earth, and the factory had grown like a mushroom.

Other flights had followed that first, flights which carried Apex ships around the world and over the blizzard-swept ice of the

South Pole. Adventure had followed adventure as Andy and his faithful companions had flown to fame and riches, until now, wherever the sound of an airplane engine was heard, people knew and loved Andy Lane. Yet through all these crowded days, during which presents, medals, and public worship had poured in upon him, he had not changed from the quiet, unassuming young man he had been when he first presented his idea to Mr. Avery. To be sure, he had purchased a splendid new home for his father and mother and had built himself a private hangar and landing field beside the wonderful house. But fame and wealth had not spoiled him. He was still shy and embarrassed when crowds followed him on the street and still retreated into buildings to avoid people who shouted, "Oh look, there's Andy Lane!" And he was still thrilled through and through every time that he and his world-famous crew began a long flight that was to test out a new plane or explore new countries.

So he stood in the corridor now, glancing

into the tiny but comfortable stateroom that was to be his home while they were testing out the new automatically controlled Diesel-engined ship which, if successful, might revolutionize air travel. Against the forward wall was a combination desk and chart table, above which, in a long series of box-like pigeonholes, were kept the rolled-up maps and charts of every part of the world through which the flight might take them. Built into the side wall beneath the port-hole was a couch bed. Against the third wall was a capacious wardrobe containing clothes for cold weather and for the tropics. Two comfortable chairs completed the furnishings of the little room. But to Andy's glowing eyes the place was as large and as luxurious as a palace. A place to work and a place to sleep, his own room, the office of the commander of the ship. What more could anyone want?

He turned reluctantly away from the door and, walking a few steps down the carpeted corridor, stopped at the next cabin. It was no larger than his own and equipped,

like the other, with a berth and a well-filled wardrobe. But instead of a desk and chart table, the forward wall was completely occupied by a long table upon which was mounted a compact but very efficient radio installation. Sitting in front of the table was a slender boy nearly five years younger than Andy. His sensitive fingers were turning a dial, his head almost hidden by a set of ear phones and an enormous pair of horn-rimmed spectacles. So intent was he upon the gleaming instruments in front of him that he did not hear Andy enter.

"How do you like this ship, Sonny?" shouted the young captain, perching himself upon the edge of the berth.

Sonny Collins looked up from his work, then removed the ear phones and sat back in his chair.

"This is one of the best sets we've ever had, Andy," he said delightedly.

"I didn't ask you about the set, dumbbell," laughed his older friend. "I said *ship,* not set. Or don't you know we're now in the air?"

"Oh, sure," said Sonny vaguely. "I felt her take off. But I've had a little trouble with this transmitter so I unwound the aerial right away and tested her out. She works wonderfully now. Why, I just exchanged signals with an amateur in Cleveland! Pretty good for this time of day!"

"If that isn't just like you!" exclaimed Andy. "I'll bet you have to stop and think a while before you can tell me whether this is the rocket ship or the *Flying Windmill,* or a new ship that we're just trying out. To you, the only difference between the race around the world and our wild hop to the South American jungle[1] is that on one you had this kind of transformer and on the other that kind of coil. Isn't that so, ivory-head?"

Sonny's large brown eyes were a little embarrassed.

"Listen, Andy," he said, earnestly, "the only reason I have for being a part of your crew and getting in on all the fun and the excitement is because I happen to have

[1] See "On the Wings of Flame."

fooled with radio ever since I was knee-high to a snake. I'm not old enough to be a pilot and I don't know an airplane engine from a lawn mower. But I do know radio. And you have to have an operator on these big hops. So the thing for me to do is to keep right on the job or you won't take me along with you."

Andy laughed at his younger friend and slapped him so hard on the shoulder that the boy's spectacles slipped down on his pug nose.

"Sonny, the only flights you've ever missed were the first two we ever made. After your father once gave you permission to come along with us, you've been with us on every hop. I'd no more leave you at home than I'd stay at home myself. You're just as valuable at that radio set as you would be if you were as old as the turkey I had for dinner last night!"

Andy rose, stretched himself and glanced out of the porthole at the solid mass of gray fog that swirled around outside.

"Boy, I'll sure be glad to get south into

warmer, clearer weather," he said wholeheartedly. "If it weren't for these electric heaters we'd be almost freezing to death right now."

"The trouble with the south," declared Sonny, reaching for his ear phones, "is that the tropics are always full of static."

Andy went out of the room grinning. Sonny hadn't even asked how the new motors were turning up or how the wonderful gyroscopes were working! The boy seemed to take the mechanical operation of the ship as much for granted as though he were a passenger aboard an ocean liner. The only thing that worried him was static. But then, that was what had made Sonny the most famous young radio amateur in the world. During moments when the huge transatlantic *Apex* was being beaten down toward the leaping ocean with her cargo of fifty passengers, Sonny had been calmly sending his messages through the ether.[1] During those age-long days when they had been drifting helplessly across the Arctic

[1] See "Pirates of the Air."

Ocean in the great dirigible *Britain,* Sonny had been working calmly to repair the broken radio set that he might flash news to the waiting world.[2] Andy could not imagine starting a flight without him.

The next cabin belonged to Sam and Joe. Beyond that was the main saloon, or living room, which extended the full width of the fuselage. Despite the darkness of the clouds on the other side of the portholes the room was as light and as cheerful as a sun porch on a bright June afternoon. Wall brackets and inverted lights cast their warm illumination on the comfortable chairs, couches, and reading tables, and made one forget the grayness outside the plate-glass portholes.

There was a surprising amount of space within the great hull of the *Apex.* She had been designed to carry thirty-two passengers upon regular nonstop flights between New York and Los Angeles, but had been equipped as a private air yacht for the use of Andy and his crew while they were mak-

[2] See "The Runaway Airship."

ing a long cruise to test out the new inventions which had been made a part of her. If the Diesel engines and the gyroscope controls were successful, her interior would be transformed into Pullman-like compartments for the use of paying passengers, and a score of similarly equipped sister ships would be constructed for the projected line.

At the after end of the living room was a door from which came the odor of broiling chops, frying potatoes, and percolating coffee. Andy sniffed hungrily and walked to the door. Above the hissing of the meat came Sam's lusty voice.

"Listen, you flying pooch! If you don't sit up and beg like a gentleman should, all you'll get will be the bones and the gristle! Now, Scotty, put your front feet up and say 'please.'"

Sitting in the middle of the galley floor was a tan-and-white collie, whose black nose was wrinkling longingly at the fragrant odors and whose brown eyes were fixed pleadingly upon Sam Allen's face. From time to time the famous flying dog would

raise one clumsy fore paw as if he wished he could sit up and beg. But he was too big and awkward. Every time he tried to raise both paws at once, he would fall over in a clumsy heap. After the fourth effort he looked as though he wanted to lie right down and have a good cry. But Sam reached toward the shelf of his kitchen cabinet, produced a raw, juicy chop and tossed it into the air. Scotty waited an instant. Then his white teeth came together with a snap, and he walked with great dignity into a corner to strip the meat from the bone in peace and quiet. The gentle swaying and bumping of the floor as the *Apex* swept through the skies bothered the dog not at all. Indeed Scotty had spent almost as much of his life in the air as on the ground. As a tiny furry ball of a puppy he had accompanied his master, Andy, on the first nonstop flight, and ever since that day had been as much a member of Apex crews as Joe, Sonny, or Sam. More than once his sensitive nose and sharp teeth had saved his friends from disaster at the hands

of men who would have captured the ship and killed Andy and the entire crew.[1]

"Lunch in twenty minutes," announced Sam, who prided himself that he was the best aerial cook in the world. "It's twelve o'clock and I'm as hungry as though I hadn't eaten for two years."

"Good night!" exclaimed Andy. "Here we are, hardly out of sight of the field and you are beginning to worry about your food. Why not just have some sandwiches now and have a real meal to-night when we're all settled down into our routine?"

"No, I'm all faint and tired," declared Sam. "You know me; when I miss a good square meal I lose twenty or thirty pounds."

"You've never missed a meal in your life!" retorted Andy. "Some of them may have been two or three days late, but you've never missed one. You're the world's champion long-distance eater. You'll start eating this noon over New Jersey and if the plane doesn't crash, you'll still be eating when we reach Virginia!"

[1] See "Over the Polar Ice."

But Sam was not listening. He was tossing pots and pans around in happy confusion. His kitchen was a marvel of efficiency. Everything was operated by electricity. A four-burner electric range, a toaster, a percolator, a waffle iron, a motor-driven egg beater and batter mixer—even a queer-looking device that boiled eggs two, three, or four minutes, as desired. Sam had designed the galley himself and, after presiding over many an aerial kitchen, he knew just what was needed to make life comfortable in the air.

"Beat it, Andy," he roared, "or I'll make you set the table and wash the dishes after lunch."

"To look at you," remarked Andy, poised for instant flight, "who'd ever think that you were chief engineer for a great airplane company? You look more like an overstuffed sofa!"

He ducked a chop which hurtled through the air with the speed of a rifle bullet. And with that he was gone, leaving Sam singing

as he fussed around his beloved kitchen.

Just to the left of the galley was a long narrow corridor which led aft through the fuselage, past door after door, all of which were closed and neatly numbered. These doors opened into tiny staterooms, designed to accommodate paying passengers, but now used for the storage of supplies for the long journey ahead. In one was was rolled a collapsible rubber lifeboat, four life belts, fishing tackle, rifles, automatics and ammunition. In another, dozens of boxes of foodstuffs all neatly piled in rows. In a third, spare clothing, extra parts for Sonny's radio and box after box of necessary odds and ends. The last contained a very efficient tool bench and a tremendous amount of engine supplies and repair parts. Sam had boasted that with the tools and equipment in this cabin he could manufacture two completely new engines.

The regular fuel tanks, of which there were four, were mounted within the single huge wing, with an additional tank, in-

stalled especially for this important test flight, in the extreme bow, foward of the control room. Lubricating oil and fresh-water tanks were placed in the wing and in the stern of the fuselage, where they balanced perfectly with the weight in the bow.

Andy, well satisfied with his tour of inspection, returned to the main saloon, or living room, where the fat and happy Sam was already setting a gate-legged table with white cloth, porcelain plates, upon which the name "Apex" had been stamped in gold, and gleaming silver knives, forks, and spoons. The fact that his dining table was more than a mile above the ground did not prevent Sam from setting the service just as carefully as though he were arranging for a formal luncheon in the dining room of a fashionable hotel. Each plate had to be just so, every piece of silver in its proper position. So painstaking was he in every detail that Andy wondered if he could be the same bundle of furs who had climbed out on the catwalk in a screaming blizzard over the polar ice to adjust motors half-

frozen by a 70-degree-below-zero cold. Truly, Sam toying with his pots, pans, and dishes was a different man than Sam defying death when his beloved engines went wrong!

The young captain looked out of a porthole. The clouds were breaking up now, and he was able to catch an occasional view of the snow-covered ground six thousand feet below. Long black ribbons of roads crawled through the white expanse of countryside. Huddled villages here and there looked like splashes of ink upon a white sheet from which highways spread like spider webs. They were over New Jersey, he reckoned, speeding ever southward at the rate of a hundred miles an hour. By late afternoon the air would be milder and snow would have completely disappeared.

"Come and get it!" shouted Sam, beating lustily upon a Chinese gong. "Come and chew something!"

Andy went hastily to the control room, where Joe was standing by the forward windows watching the pilotless plane slide

ahead, precisely upon her course. The spinning tops within the odd-shaped box were true to their duty, guiding the plane with a mechanical certainty that no human hands could improve upon.

"Want to eat now, Joe?" asked Andy.

"No, thanks. I'm too fascinated watching 'Iron Mike' do his stuff. I'll eat when you are through, or, better still, you can send something in on a tray and I'll eat it while the gyroscopes run the plane for me."

Sam's luncheon was perfection itself. No cook in the world could have served more delicious chops, which were tender within and crisply browned on the surface. The French-fried potatoes were the color of golden butter, the rolls hot and fragrant.

"Now that we've all become rich as a result of our flights," said Andy, "we have a cook in our kitchen at home who's supposed to be the ninth wonder of the world. But nothing she ever puts on the table compares with what Sam feeds us on these trips. I don't suppose, Fatty," he added,

with a sly wink at Sonny Collins, "that you'd consider taking a new job."

"I should say not," replied Sam promptly. "Being chief engineer of the Apex Company is the finest job in the world. Look at all the big hops I get! But what's on your mind, Andy? What job were you thinking of?"

"Why, I thought I might hire you for cook at home," replied Andy, his expression very bland.

"You big sap!" snorted Sam. "You forget that, because of the silly way you've been splitting up all our prize money, I'm almost as rich as you are. No, sir! Any time you have a craving for victuals cooked by the master chef Samuel Allen, just invent some new reason for another long-distance hop, and I'll cook for you as long as you keep me in the air."

"By the way, Andy," asked Sonny, "have we decided definitely where we're going yet?"

"Not yet, big boy, except that we're go-

ing somewhere warm. There's no use trying to plan any definite route because this is just an experimental hop to give gyroscopes and fuel-oil engines a thorough tryout. We have nearly three thousand miles worth of oil in our tanks, and that gives us a big cruising radius. The Apex Aeroplane company has service stations at Jacksonville, Florida, at New Orleans, Louisiana, and at Fort Worth, Texas——"

"And at Mexico City, Mexico," added Sam, meaningly.

Andy looked at him thoughtfully.

"No reason why we shouldn't go to Mexico if we like, Sam," he said. "We're planning to stay in the air for a week anyway, so we might as well fly down into Central America as to spend all our time cruising around on the Gulf coast. Mr. Avery told us to fly anywhere we wanted, just so we found good weather, made all our tests, and enjoyed ourselves. Incidentally, the Apex company is getting some good business out of Central America, so it might be

a good scheme to advertise the plane down there."

"No wonder he told you to fly where you pleased!" declared Sonny indignantly. "You're a vice president of the company, drawing down a salary of $25,000 a year, aren't you? And what's more, you're largely responsible for the growth of the whole company. I'd like to see anyone tell you where to fly!"

"There, there, fireband!" laughed Andy soothingly. "If anyone has a softer snap than I have, I'd like to know who it is, so don't get upset. Listen; right after lunch go to your static box and ask the factory to have their Jacksonville branch send up a refueling plane when we get there. Don't know yet what time we'll be over their airport, but it ought to be early in the evening. We'll keep them in touch with our speed through the afternoon. And, for the luvva Mike, don't let them forget that what we need is fuel oil, not gasoline."

"I'll tell the world!" agreed Sam, heart-

ily. "If we pumped gasoline into those Diesel engines, people would be picking bits of steel cylinders and crank cases and push rods out of their skin for the next eighteen years. And this plane would be scattered over a territory as wide as the original thirteen colonies. So have a heart, Sonny, and tell 'em we want the kind of oil they use for burning in furnaces."

"That's a good idea of yours, Sam," declared Andy. "You know, we haven't been near Central America in any of our wanderings except when we were on our way to the South Pole in the big flying boat. And then, because of the danger of forced landings on dry land, we cut straight over the Panama Canal. I'd like to see some of the countries down there, and if we can do it in the line of our regular duties, it will be all to the good."

"I'll say so," nodded Sam contentedly. "What appeals to me is the fact that I've been cold for months now, and if we play around Mexico and Guatemala and such places for a few days, it will thaw the

icicles out of my system. How I hate to go out and baby those engines when the winter wind is gnawing at me! Brrrr! All of which reminds me of something I've been trying to forget for an hour."

"What's that?" asked Sonny, pausing on his way to the radio room.

"I'm due out in that cold wind right this minute," replied Sam dolefully. "For two cents I'd strap on my umbrella and leap overboard. Yes, sir, if we weren't headed due south at this moment, I'd jump out like a mouse leaving a cat party."

Heaving a great sigh, he produced a suit of fur-lined coveralls from the locker and began to climb into them.

"Be sure and put on your parachute pack," warned Andy. "We can't afford to lose you, and there may be a coating of ice on the gangway leading to the engines."

As Sam added to his already magnificent bulk by strapping a parachute pack to his back, Andy walked swiftly to the control room, where he could watch Sam tending the engines and be ready to take instant

command in case of emergency. Joe, seated comfortably behind the idle control wheel, was polishing off the last remains of the lunch which Sam had brought him before the other three had seated themselves at the dining-room table.

"Sam's making his first trip out to the engines," said Andy briefly. "When he's through, you'd better turn in and get a few hours' sleep. We're going to refuel at Jacksonville and fly on through the night."

Joe nodded contentedly, placed his tray upon the floor, and sat alert at the controls, to be ready to seize them immediately in case something happened to stop the whirling gyroscopes while Sam was on his perilous perch outside.

Andy, standing by the window on the port side, saw the mechanic's burly figure inching its way out along the narrow catwalk which led from the cabin door to the two great engines suspended from the left wing. One of the engines was a tractor, turning a propeller in front, its companion a pusher, turning a propeller in the rear.

Into the cyclone of wind created by the progress of the plane through the air and the slipstream of the propellers, Sam fought his way, apparently unaware that if he should fall he would hurtle down a full mile to the ground below.

Now he had reached the boat-shaped cowling in which the twin engines were mounted. Deftly he clipped a safety strap to a rail which encircled the engines and, relying upon the strap to prevent himself from being blown overboard, he removed both hands from the rail. From a wide-mouthed tool bag suspended around his neck he took a long-handled screw driver and a pair of pliers. With these he began to probe in and around the two roaring engines, touching this, twisting that, making sure that connections and bolts were tight.

Then he signaled to Andy, who stepped to the switchboard and cut off one of the engines. Sam worked feverishly on the motor, which was kicking over very slowly because of the pressure of the wind against its propeller. Satisfied at last, the skillful

engineer signaled again, and Andy turned on the motor which had just been idling and switched off its companion. Ten minutes later Sam placed the tools back into his bag and returned along the catwalk. For a long moment or two the pilots could not see him. Then he reappeared on the other side, where the two starboard engines must be cared for. Here he went through the same performance, standing calmly out in the icy blast, trusting his life to the safety belt which held him to the steel rail and working on his engines with the same care and attention that he would have given them on the test floor of a warm hangar.

The sight was not new to Andy, yet he could not take his eyes from the Teddy-bear-like figure out there in the cold. He had watched the faithful Sam baby his engines while the ship was almost turning turtle in storms, had watched him calmly test cotter pins and valve clearances over the mid-Pacific and at night over the Indian Ocean.[1] But it never failed to give

[1] See "Racing Around the World."

him a thrill. This constant care of the engines in flight was one of the reasons for the astounding records that had been set by Apex planes and Apex motors. Sam had been rewarded well in money, but he never would receive sufficient credit for his heroism.

Now the bulky figure was crawling in along the catwalk. Andy breathed a long sigh of relief. Joe rose from behind the wheel and went into his cabin. A few moments later Sam, his face blue with the cold, stamped into the control room, where Andy stood watch over the ship's course through the air.

"Sweet cookie!" Sam whistled. "I'm one big iceberg! Lucky these Diesels run hot, or I'd have frozen to death."

"You've been out on those catwalks in lots colder weather than this," Andy reminded him.

"Well, don't remind me of it," complained the other. "I'll never warm up if you do. Better cut down our power. She'll fly level with two engines. Climb with

three. Now that we know our engines are O.K., let's save them."

Andy cut the switches of two engines and watched the instrument board alertly for any change in the flying ability of the ship.

The air speed meter indicated that her forward speed had been reduced to eighty miles an hour, but she plowed as steadily through the air as with all four engines roaring wide open.

Sam peeled off his fur-lined coveralls, rubbed his hands smartly to restore their circulation, and then opened the box which contained the magic tops that were responsible for guiding the ship. Andy watched him with interest. One of the gyroscopes, spinning so swiftly that it looked as though it were not moving at all, was standing vertically upright, the other, horizontal. No matter how the ship swerved or rocked, these whirling gyroscopes remained rotating in exactly the same position. But as the plane rocked back and forth around the stationary tops, contacts were made by switches which instantly set electric motors

to work operating the controls, and these in turn moved the ailerons, elevators, and rudders to bring the ship back to its normal position in the air.

It was astonishingly simple, marvelously efficient. Andy watched Sam oil the moving parts with the finest grade of machine oil and replace the cover on the box.

"The day will come," predicted Sam, "when every passenger-carrying plane in the country will be flown by these gyroscopes. They'll hold a ship steadier in the air than a pilot can possibly do because their mechanical brains move faster than a human's. And there'll be no chance for a pilot to become sleepy or careless, either."

"It looks mighty good to me," replied Andy, "but I sort of hate to see all the fun taken out of flying by things like that."

"There'll still be plenty of fun," smiled Sam. "There'll always have to be a pilot in the control room, just as there'll always have to be an officer on the bridge of a ship. These 'Iron Mikes' can't see another plane in the air and dodge a collision, you know,

and if something goes wrong with them there won't be much time to talk it over. So the day of the pilot won't be gone for a long, long time."

He stood beside Andy for a moment, glancing down at the snow-covered hills and valleys which were sliding beneath the high-flying *Apex*.

"And now," he said, "I'm going to wash the dishes and take a little nap. When I wake up—I hope there won't be any snow down there. I crave to see palm trees and people swimming in the ocean. I may have forty-two layers of fat protecting my bones, but the cold weather doesn't seem to know it. I can feel every bone in my body rattling against the next. I can hear them rattling, too. It sounds like winding up a dollar watch. Pip, pip. See you later."

CHAPTER III

THE ATTACK

ANDY, left alone in the control room, paced slowly back and forth, watching the great ship sailing ahead through the ever-warming skies. It was strange standing there doing nothing, when for so many thousands and thousands of miles he had sat in the pilot's seat of other planes pulling and hauling at the control wheel. It would take him, he knew, many, many hours to become accustomed to the fact that "Iron Mike" was as good a pilot as he.

Scotty entered the room waving his bushy white tail. He saw Andy standing by the window and turned his eyes toward the twin pilots' chairs, where he expected Joe to be sitting. Seeing both seats vacant, he stared at them for many moments in doglike bewilderment. It was the first time in Scotty's life that he had felt that familiar

vibration in the floor under his paws and yet could see no one sitting in those leather chairs. But his master was standing there quite content, so everything must be all right. Reassured, the huge dog leaped into the nearer chair, pawed the cushions for several minutes as his ancestors had once pawed long grass to make themselves a bed, and then, after turning round and round, collapsed into an enormous round ball of tan and white fur. One large brown eye appeared from the fur, glanced at Andy for a sleepy moment, then disappeared.

So for the next two hours Andy and his dog remained there in the control room, the former standing watch over the droning plane, the latter keeping his master company by his mere presence.

Baltimore appeared amid rolling white hills, the tall buildings of its business section curiously flattened out. For a few moments Andy stared down at the squares and rectangles of the city blocks and at the tiny ships at their piers and at anchor in the turning, twisting rivers. Then the city

had slipped astern and the *Apex* was heading toward Washington. Now patches of brown earth were beginning to show through the covering of snow, which was no longer pure white, but gray and dingy. The long straight road between Washington and Baltimore was a slash of deep black, crawling up and down the hills to the very horizon ahead. Motor cars rolled slowly along the road, passed in a moment by the great bird a mile overhead.

The tall spire of Washington Monument appeared over the hills straight ahead, then the massive dome of the Capitol Building. Houses became more frequent beneath the shadow of the monoplane's wing. The snow had almost disappeared within the past ten minutes. Now Andy was looking down upon the wide streets of Washington extending out from beautiful buildings like the spokes of enormous wheels.

As they crossed the river and began to fly over the hills of Virginia, Sonny came in with a message from the factory at Mineola, and stood looking down at the town of

Alexandria as the young captain read his penciled scrawl.

"Letter arriving in morning mail overlooked in the hurry and excitement of your take-off. From man named Borokoff in Richmond, Virginia, who wishes to buy two large Apex transport planes for passenger line from Richmond to Washington, Philadelphia and New York. If does not interfere too greatly with your plans, would be glad if you could land at Richmond Airport and show him ship you are now using. Let me know and I'll wire him to hurry to airport so your trip will not be delayed too long. One of our salesmen will fly to Richmond in morning and try to make the sale. Regards to all. RONALD AVERY."

Andy was conscious of a keen disappointment. He had hoped to make this a nonstop flight, like so many of the other wonderful hops that had made such tremendous records for Apex planes and motors. Aboard this ship were two new devices that needed full and complete testing, the Diesel engines and the gyroscopic controls. Noth-

ing would test them quite as well as a long, unbroken flight, and, if they were successful, nothing would advertise them quite as well as a spectacular hop such as that which had originally brought fame to the Apex company. If the engines and the automatic controls survived a long, hard test, it would mean added business for the Apex company, who would immediately begin to build them and sell them throughout the world.

But orders were orders, even when sent in the form of a polite request. If this man at Richmond were to establish an air line, he might purchase many Apex ships. That would bring added prosperity to the company of which Andy was a vice president, and therefore should not be neglected.

"Well, Sonny," said Andy, reluctantly, "We'll have to count our nonstop flight as having begun from Richmond instead of from New York. Send a message to Mr. Avery asking him to have this Mr. Borokoff at the Richmond Airport as soon as he can get there."

Sonny hurried out with the message. How

could either of the boys have guessed the treachery that lay behind the innocent-looking request for a demonstration? It was, on the face of it, a perfectly ordinary commercial matter, a request such as the sales force of the Apex factory received almost every business day. So, with no reason to be warned, Andy permitted the plane to continue on a course which was to lead it and its crew into the very jaws of a carefully prepared trap.

A smoke smudge in the skies ahead marked the spot where Richmond, once the capital city of the Confederate States of America, nestled amid the rolling hills of Virginia. The ruler-straight course of the *Apex* would have taken her well to the westward of the airport, but Andy, glad to get his hands on the controls again, slipped into the pilot's seat, switched off the gyroscopes and headed the great monoplane toward the level patch of brownish-green at the edge of the city which marked the airport.

Fifteen minutes later he closed the throt-

tle and headed downward in a long spiral glide, studying the ground ahead carefully to determine whether the thawing weather had left soft ground which might cause the great ship to cartwheel.

Almost before the powerful engines had changed from a full-throated roar to a gentle, even popping, Joe and Sam stampeded into the control room shaking the sleep out of their eyes and staring wildly about to see what emergency had caused Andy to head toward the ground.

"It's all right," Andy reassured them. "No trouble. Mr. Avery has a red-hot prospect here for the sale of a couple of planes. Wants us to show this one."

The two who had just been snapped out of their sleep sighed with relief.

Joe eased Scotty out of the second pilot's seat and sat down beside Andy, much to the disgust of the collie, who looked almost ready to bite a juicy steak out of the leg of the man who had thus rudely waked him. Instead, however, he stalked away in great

dignity, entered Sonny's radio cabin and hopped on to the boy's bed, where he settled down to finish his nap.

Under Andy's skillful hands the *Apex* slid down in a series of long, even circles, straightened out over the hangars, and coasted to the ground in a three-point landing so gentle that those within the control room scarcely realized that her wheels had touched the earth.

Then, opening up the two engines on the port side, Andy turned the ship around and began to taxi back toward the hangars. Motorcycle police roared out to meet the incoming ship, for Mr. Avery had telegraphed the city officials that the famous Andy Lane would soon arrive and that every precaution should be taken to prevent crowds from swarming across the field. In spite of the fact that scarcely an hour had elapsed since Andy had decided to land at Richmond, word of his coming had spread through the city. Thousands of people had driven to the airport to see the national hero and his famous crew. Heavy ropes had been

stretched at the outer edges of the tarmac, and scores of policemen were at work holding back the eager people who wished to catch a glimpse of the most famous flying crew in the whole world.

Andy steered the heavy ship to the take-off line, throttled the motors to idling speed and turned her into the wind.

"Listen, you fellows," he said, "if I get out here, they'll have reception committees, speeches and everything, the way they always do when we visit a town for the first time. Look, a lot of birds are coming over here already! Joe, you jump out and meet them and ask them if they won't excuse us this time. Tell them that we just dropped in for a few minutes on important business and that we'll come back another time to make a real visit. Then find this Borokoff bird and let me talk to him right inside the plane here."

He glanced out of the window toward a group of important-looking gentlemen who were walking toward the plane. Then, turning to Sam: "Fatty, suppose you take this

time to jump out and inspect the wheels, undercarriage and everything else on the outside of the plane. No telling when we'll have another chance."

Both men nodded agreement and left the room. Joe leaped to the ground to meet the reception committee and to find the man who was a possible purchaser of Apex airplanes. Sonny, having no possible interest in anything outside the ship, remained in his cabin, taking this opportunity to heat up his electric soldering iron and to begin repairs upon a loose connection which had been giving him some trouble ever since the *Apex* had left Mineola.

A short olive-skinned man entered the cabin and bowed low to Andy. His high cheek bones, prominent nose, and dark complexion stamped him as a foreigner. A Russian, of course, Andy decided, as soon as he introduced himself.

"Mr. Lane?" the stranger bowed. "I am so enchanted to meet you and so honored that it should be the so-famous young flyer who will show me the beeg ship."

"Mr. Borokoff?" asked Andy. The Russian nodded politely. "Mr. Avery sent me a message to stop here. If you'll come with me, I'll show you the entire ship, starting with the stern."

"But if you'll excuse me," objected Mr. Borokoff, "it is the new devices that I wish the most to see. I have already examined plans of the fuselage. They are beautiful, but are to be found also in other ships besides those made by your own great company. First, if it pleases you, I should like to examine the automatic control."

"I don't know," said Andy, doubtfully. "It's worked beautifully so far, of course, but I don't think the factory wishes to take orders for planes equipped with gyroscopes until we have had a chance to test them out more carefully."

"But surely," persisted the Russian, "they are no secret? If I should see them, I could then watch the newspaper accounts of your test flight and then, perhaps, order my planes so equipped."

Andy saw no harm in explaining the

mechanism to the visitor. It was true that the devices were not secret, having been invented nearly a year before. The Apex factory had bought the patents and had spent considerable money in perfecting the controls, but had been careful to protect its improvements by additional patents. Certainly, he thought, Mr. Avery must have known something about this man before he would have asked Andy to break his trip to show the plane. So without further hesitation he carefully explained the operation of the gyroscopic control and of the Diesel engines.

It was clear to Andy that Mr. Borokoff was thoroughly familiar with airplanes and engines. In his queerly accented English he asked dozens of questions, all exactly to the point. In five minutes he seemed to have grasped the meaning of everything that was at all new or unusual about the *Apex*.

Then the Russian strolled over to the window and looked down at the landing field. Andy, standing beside him, telling him of the remarkable performance of "Iron

Mike," saw Joe Lamson just beyond the right wing tip busy talking to a group of men. Near the rudder was Sam Allen examining the tail skid.

"Look," said Mr. Borokoff, suddenly, pointing to the box which contained the gyroscopes. "Isn't that a broken wire near the bottom?"

Andy walked across to the box and leaned over to examine it. He became aware that the Russian was bending over him. Something within him warned him of sudden danger. Not knowing why, he straightened up. But he was too late. A fistful of blued steel swung downward in a glittering arc. The butt end of a heavy revolver cracked down against Andy's head. Without a sound the boy plunged forward on his face.

CHAPTER IV

A TWO-MILE FALL

Borokoff studied Andy's unconscious figure for a moment, then turned quickly and glanced out of the window. No one, he knew, had seen that swiftly descending gun. Outside all was as it had been a few seconds before, when he and Andy had stood by the window. Lamson and Allen were still busy. Police still kept onlookers well away from the plane, whose four motors were kicking over under closed throttles.

The Russian slipped into one of the two empty pilots' seats. The runway ahead was clear. With a sweeping motion of his right hand he shoved the engine throttles wide open and pulled the control wheel back to his chest. The tremendous roar of the four engines drowned out the shouts of astonishment from the people outside. The four whirling propellers blew Joe Lamson and

Sam Allen backward for several feet before they could dig their heels into the ground and stare with open-mouthed amazement at the slowly rolling ship.

Under the spur of the mighty engines the monoplane gained speed with every passing foot of ground. Joe and Sam, who had begun to run after her, found themselves left hopelessly behind.

The Russian, sitting calmly in Andy's seat, handled the giant plane like the expert that he was. He held her to the ground until she seemed to strain against the wheel in an effort to be off. Then he permitted her to rise, not forcing her into a steep climb until he became accustomed to her actions in the air. He climbed swiftly over the trees at the lower end of the field, banked slightly to follow a valley that led behind a chain of hills to the westward, and then began to force her up and up to the full limit of her climbing abilities.

He stole one glance below and astern before his view of the airport should be cut off by the first of the high hills. The crowd

had broken across the tarmac and was streaming over the ground in the greatest confusion. Cars were moving slowly through the mob. Men were running this way and that. What they thought to be Andy's amazing departure had created something closely akin to a riot.

The Russian kept the *Apex's* nose well up, forcing her higher and higher. At 7,200 feet she plunged into a cloud bank. Still he climbed her. At 8,400 feet she emerged into the bright blue sky above the unbroken sea of clouds. At 9,000 feet, her new pilot examined a map affixed to the chart table in front of the control wheel. Then he turned the bow until it was heading due west. He snapped the switch leading to the gyroscopic control and took his hands from the wheel. He watched the compass for a few moments and glanced at the spirit levels which showed that her wings were level in the air. Presently he rose from the seat and stared down at Andy Lane.

"A good job, if I do say so myself," he

muttered. "And now to get rid of this fellow."

Now he seemed more nervous than he had at any time since he had stepped aboard the *Apex*. He cast frequent glances at the instrument board and at the ocean of clouds below, as though unable to believe that this plane could fly without human hands on the wheel and human feet upon the rudder pedals. Once he stooped over and placed his ear close to the box which contained the gyroscopes, as if to assure himself that they still hummed and clicked in pursuit of their duty. He eyed the emergency door set in the side of the control room and seemed to measure the distance from its threshold to the pilot's seat and to estimate the time it would take him to cover the distance in case something happened to the gyroscopes. His eyes fell upon the two parachute harnesses hanging beside the door, always kept there by Andy and Joe in case of sudden emergencies. The worried expression left his dark face. He stepped over to the door,

lifted one of the packs from its hook and donned it without difficulty, apparently knowing just where each strap and buckle belonged and just how the 'chute, which was of the seat pack type, should hang down behind.

Then, with a final glance out of the windows, he stepped over to the still-unconscious Andy and began to drag him toward the door.

At the first sensation of sliding across the vibrating floor Andy opened his eyes and stared about him. His blue eyes were clouded with pain, his head whirling from the cruel blow it had received. He tried to lift his arms to steady himself, but they seemed too heavy to move. He suddenly looked straight up and stared into the grim face of the man whose hands were under his armpits, dragging him toward the door. Memory flooded back into his brain. This man had struck him. But why? And where was Sonny all this time? Could it be possible that the boy had not realized a strange man was running the ship?

Andy waited a moment before trying to move again. Strength was coming back into his body. In a moment he'd be able to struggle to his feet and settle everything.

"Sorry I have to get rid of you," panted Borokoff, still pulling him. "When they find you down there, if they ever do, they'll think you went crazy, flew away with the plane and then fell overboard. There won't be a mark on you that might not be caused by your fall."

Andy said nothing. He must save his strength for the final effort. His brain was still whirling. He must steady himself. The man's arms were like hooks of steel, surprisingly strong to belong to so short a figure. Andy knew that every second that he could gain before the time came to stand up and fight was helping him to grow strong. It was a temptation not to struggle now. But his arms and legs still felt as though there were no muscles in them.

Borokoff's right hand slipped to Andy's collar. He was opening the door with his left hand. The door was hinged at the for-

ward edge and designed to open outward. The wind blast against it was holding it closed. Borokoff had to press his shoulder against the panel to shove it past the latch.

Now! Andy twisted out of the man's grip and lurched to his feet. For an instant he stood there swaying dizzily. He wasn't as strong as he had thought. Borokoff's fist flashed out and struck Andy's jaw. Andy's knees sagged and he clinched with his enemy, throwing his two muscular arms around the man's body in an effort to keep to his feet.

And as the two stood there, just at the edge of the doorsill, Andy heard a snarl and a patter of racing paws. He had an instant's glimpse of Scotty bounding across the floor, his ears laid back, his teeth showing whitely in his half-opened mouth. The collie leaped straight for Borokoff's throat. The Russian staggered back, ducked his head, and crashed against the unlatched door. Scotty, having missed his mark, dropped to the floor, crouched and made ready to leap again.

Borokoff's body crashed against the door, which swung open against his weight. The Russian's arms were still about Andy as he teetered there, on the very brink of a nine-thousand-foot drop. He swayed outward, made a convulsive gesture to grab the door-sill, and then screamed as he felt himself pitch into space. Andy was dragged past the door with him. He reached for the sill with his right arm, but it was too late. Together, their arms tightly around each other, the two hurtled, end over end, toward the clouds below.

Andy, whose brain had been, an instant before, befuddled by Borokoff's blows, suddenly felt his head clear as if by magic. His hands were touching the webbed straps of the parachute harness. He knew that his life depended upon that 'chute, and found himself wondering whether it would support the weight of two men. He had no sensation of falling. It was as though he and this man to whom he was clinging with all his might were floating upon a soft bed of air. It was strange, though, how the

clouds were swinging around like a gigantic pinwheel. He looked down past Borokoff's feet and saw the *Apex* sailing along upside down. No, it was he and the Russian who were upside down.

Borokoff was struggling now, trying to free himself from Andy's weight. The Russian's right hand was squirming between their two bodies, trying to reach the parachute release ring which was squeezed tightly between their chests. Andy was not ready yet. He clung even more tightly to prevent the man getting hold of the ring. If the 'chute should open now, he would be snapped off like a stone from a sling shot.

Everything suddenly turned gray and wet and cold. They were falling through the cloud bank. Andy raised his feet and wound his legs tightly about Borokoff's. In the sudden emergency his strength seemed restored. He felt calm and confident, fighting grimly for his one chance of life. He knew that his two arms were outside of the 'chute harness against the Russian's back. He

must get them under the harness, or the opening parachute would break his hold. The Russian was screaming now, twisting and struggling to kick Andy away and to reach the release ring. They broke through into daylight, above an earth that was spinning as crazily as a Fourth of July pinwheel. Andy carefully pulled his right arm away from the harness strap and slid it beneath the broad webbing. Still clinging tightly with one arm and both legs, he then worked his left arm beneath the webbed strap. Funny, how long it took to fall!

In another instant he would know whether he was to live or die. He pushed his body an inch or two away from the Russian's and felt the other's right hand jam its way up between their chests. The hand fumbled around for a moment over Borokoff's heart, its knuckles gouging hard into Andy's ribs. Andy couldn't see the man's face, his own eyes, nose and mouth being pressed hard against the other's shoulder. But he could hear Borokoff screaming. The

hand jerked against his ribs. Andy gritted his teeth and tensed every muscle for the shock.

There was a report like a pistol shot. Andy's arms and legs contracted like vises. There was a flutter of fabric and a terrific jerk of Borokoff's body. For an instant it seemed as though Andy could not hold on; the other seemed to be snatched away from him by an all-powerful force. And then the two tightly clasped figures were swinging back and forth beneath the umbrella-like parachute like a tremendous pendulum, while the earth tilted in tremendous arcs beneath them. The worst of the strain was over. Andy's muscles felt as though a red-hot iron had seared them.

Borokoff began to squirm again, working arms and legs to try to kick Andy loose. Then Andy spoke, for the first time since he had been knocked unconscious.

"If you wiggle just once more," he said grimly, "you'll never reach the ground alive. Your gun is in the pocket just under my

hand. Kick me loose and I'll pull the trigger just as I feel myself slipping!"

Borokoff ceased his struggling. Andy felt the arms about his own body grow tighter. He looked down toward the ground. It was coming up too fast for safety. The parachute had been designed to waft just one person down through the air. Now, overloaded as it was, it was descending too rapidly. There would be a had bump when they landed. The faint smudge of smoke that marked Richmond was far away on the eastern horizon. Just to the right of the sinking parachute was a river meandering among the hills like a great lazy snake. That, Andy decided, would be the James River. On both banks were tall trees whose scraggy branches might tear him to bits as he crashed through them.

"I'll hold on to you," he said to Borokoff. "You grab the right shrouds and spill some air."

"It will let us down too fast!" shouted Borokoff, his voice thin with terror.

"Better to land in the river than be killed in the trees," retorted Andy. "Quick now, or it'll be too late!"

The Russian's arms left his body. Andy felt the 'chute sink even more swiftly. The river came closer as the great umbrella slipped down to the right. The trees mushroomed in size. He caught a glimpse of a tiny hamlet a mile to the east. The river was leaping up at him. He drew a long breath. The water, cold as melted ice, engulfed him.

CHAPTER V

THE "APEX" RUNS AWAY

With all the strength in his powerful arm and leg muscles Andy forged upward through the greenish blur of the icy water toward the faint light which filtered down from the surface. In a dozen swift strokes he had burst forth into the open air, where he gasped for breath, shook the water out of his eyes and glanced quickly about him.

Borokoff's head broke through the surface. The Russian was floundering wildly. As Andy looked at him the man sank amid a churned-up froth of water. The parachute, now a limp mass of white silk, moved restlessly. Andy whirled and dived through the water like a muskrat. Borokoff was six feet beneath the surface, fighting frenziedly with the shrouds of the parachute in which his kicking legs had become entangled. Andy tried to free the man, but Borokoff was so

panic-stricken that with every passing second the tangle of twisted cords became worse. The boy swam to the surface, and treading water, drew out his pocket knife and opened it. A deep breath or two and he was again swimming down to the man who had tried to kill him. Borokoff's efforts were now feeble. He jerked at the shrouds, but his strength was gone. Andy slashed the shrouds with his knife, grabbed the Russian by his hair and pulled him to the surface.

Borokoff's strength was spent. He allowed himself to be towed to the shore, moving scarcely a muscle to help himself. Andy dragged him over the low bank and then dropped him.

"You left my dog in that plant!" snapped Andy, glaring down at the cowering man. "Was anyone else in her?"

"Not that I know of," gasped the Russian feebly.

Andy's memory was vague as to what had happened in the few moments before that heavy automatic had crashed down on his

head. He closed his eyes and tried to think. Sam and Joe had been standing outside. Where was Sonny? Fear clutched at his heart.

"Did you see anything of the radio operator?" he demanded. "A little boy with horn-rimmed spectacles?"

Borokoff shook his head weakly. Andy's face grew very pale.

"Did anyone get in or out between the time you hit me and the time you started the plane?" he persisted.

"No. I started the plane right then."

"That means that Sonny is still in that plane!" exclaimed Andy, shivering from cold and fear.

In the next instant he had forgotten the man on the ground and was running at full speed toward the road he remembered having seen a short distance from the river bank. Borokoff could lie there until he froze to death for all Andy cared. The only important thing now was to try to think of something he could do to rescue Sonny. The youngster couldn't fly, didn't know a thing

about the operation of a plane. The gyroscopes had been operating, Andy remembered that. So unless something happened, the plane would fly on and on until something happened to the controls or the fuel tanks ran dry. Brave little Sonny, alone up there with Scotty, hurtling through the air in a pilotless plane!

Here was the road. Now which way to turn? Richmond was to the right. Andy remembered a little village a mile or two to the left. He began to run down the road toward the village. A car appeared, heading in the direction of Richmond. Andy stood in the middle of the road, his arms wide outstretched. The driver would either have to stop or run him down. The car skidded to a stop. Andy ran around beside it, a wet, bedraggled figure with desperate blue eyes. He swung aboard the running board. The driver, a well-dressed, elderly man whose bronzed face indicated years of living out of doors, stared at him in astonishment.

"My plane has just flown away," gasped

Andy. "There's a boy in it. Won't you please take me to Richmond as fast as you can go?"

For another long moment the man studied Andy's face. Then he nodded abruptly.

"Get in," he said.

Andy slipped into the seat, and the man shifted the gears and engaged the clutch. The car sprang ahead and raced down the long, winding road at fifty miles an hour. Then the man spoke without taking his eyes from the road.

"Aren't you Andy Lane?" he asked.

"Yes," said Andy, trying to prevent his teeth from chattering.

"I've seen pictures of you and have read all about you. I'm proud to have met you and given you a lift. What'd you say happened to your plane?"

Andy told him as the car roared down the road. The man listened silently, his only answer being to increase the speed of his car whenever there was a straight place ahead. With every passing mile Andy's spirits grew lower. He had seen the smoke

smudge of Richmond and knew that they were not very far from the airport, but the *Apex* was flying nearly two miles every minute. How many minutes had elapsed since he and Borokoff had fallen out of the plane? Perhaps twenty. The *Apex* was now at least thirty-five miles farther away from the airport. And before the car arrived at the airport she would have flown another twenty or thirty. A tremendous cloud of dust appeared in the road ahead. Almost before Andy's companion had time to swerve his car out of the way, six motorcycle officers hurtled past. The chase was on. Those officers were covering at least sixty miles an hour—but the *Apex* was going two miles to their one! Three powerful motor cars hurtled past, following the officers. At least something was being done, even though a race between cars, motorcycles, and an airplane seemed a very futile and one-sided sort of contest.

Andy's companion did not slacken speed as he reached the edge of the city. He

seemed to know his way and cut through the side streets of the town toward the airport, keeping his finger continuously upon the horn button. And then, after what seemed hours and hours of twisting and turning through the traffic, the car was shrieking into the gates of the airport, scattering traffic to right and to left with its raucous warning signal.

"I can't thank you now," said Andy, stepping out on the running board as the car approached the hangars, "but I'll never forget the help you've given me. Come to Mineola and visit me sometime!"

He leaped from the running board and dashed toward a large cabin monoplane which was idling near the center hangar door. A group of men were clustered around the plane, other men were running back and forth between the hangars. One of the bystanders turned and saw Andy racing toward them. He shouted to the others, who stared at him as though they were looking at a ghost.

Sam's round face, no longer jolly, but white and strained, appeared from the open door of the monoplane.

"Andy!" he shouted. "We thought you were dead and were just starting to look for you!"

Without answering, Andy leaped into the cabin. Joe was there, sitting behind the control stick, staring wide-eyed at the boy. Just behind him was a stranger, a slender young man who sat in front of a portable radio set connecting wires and wrapping them with tape. He, too, glanced at Andy in amazement, but his busy hands did not cease working for an instant.

"All clear?" yelled Joe.

"Clear," came a voice from outside.

Sam slammed the cabin door and the plane began to roll ahead over the turf. Andy, almost dazed by the suddenness of everything, made his way past the leather seats in the five-place cabin and sat down beside Joe, whose steady gaze was fixed straight ahead as the ship hurtled across the ground. Sam, squeezing into the seat di-

rectly behind him, shouted through the roar of the single thundering engine.

"Andy, the newspaper office downtown telephoned a few minutes ago that they had received a short-wave message from Sonny. Sonny said that he heard Scotty barking and went into the control room to see what was the matter and he found himself all alone in the plane.

"We nearly had a fit," he continued, breathlessly. "We thought you and that man had fallen out. The officers at the flying field turned this ship over to us. We had the newspaper office radio back to Sonny to find out if he knew where he was. He replied that he didn't, but was flying over mountains and the ship was heading due west. He spent most of the time asking if we had heard anything of you. Didn't seem at all worried about himself, except to say that he didn't dare touch the controls. There was a portable radio transmitter and receiver here at the field. They let us have it with an operator. We were just ready to take off when you blew in. There haven't

been any reports from the people on the ground who have been asked to watch for the *Apex,* but we were just going to fly to the west. The broadcasting stations here are filling the air with messages for everyone to watch the sky for a big monoplane and to notify the stations when they see it. We ought to get some news before very long."

"Head due west from here," snapped Andy. The plane was already a thousand feet up and Joe was banking her over the city. "Climb to nine thousand feet and keep her wide open. When I fell out I was almost directly west of the city and 'Iron Mike' was working, so she'll keep on flying to the west if Sonny leaves her alone. How fast will this ship go?"

"A good hundred and ten," replied Joe.

"I wish I knew how fast the *Apex* was going when we went overboard," murmured Andy.

"What do you mean, went overboard?" demanded Sam.

In a few short sentences Andy told them

of the events of the past hour. They listened amazed, and when he described his nine-thousand-foot fall clinging to the body of the man who would have killed him, the faces of his two friends became very grim. Sam turned around and watched the radio operator who, with ear phones strapped to his head, appeared to be testing out his instrument.

"Get anything?" yelled Sam.

"It works," nodded the operator.

"Listen; send a message to the police to search the north bank of the James River for a wet stranger. Have them watch the roads and the near-by towns. Ask them to arrest a short dark man with black eyes and black hair who shows signs of having fallen into the river. We'll explain why later. Got it?"

The operator said nothing, but his hand became busy on the sending key. In a moment or two he looked up.

"Report from the *Apex,*" he shouted. "I'm getting it direct on the quenched gap. Operator aboard says plane running fine.

Mountains getting higher. Still at nine thousand feet, flying due west."

Andy's throat felt tight and dry. Courageous little Sonny sitting there at his set calmly sending messages! He could picture the youngster there, probably with Scotty at his feet for company. How lonely it must be up there!

"Tell him to put a parachute on," yelled Andy, "and if he wants to, let him jump out the first time he finds himself over clear country."

The operator hammered at his key, then looked up.

"He says he'll stick by the ship as long as she has any gas."

"Some kid!" muttered Joe, staring straight ahead.

"Joe," said Andy, thoughtfully, "help me to figure something out. We haven't made a full test yet, but wouldn't you say that the *Apex* would fly as slowly as seventy-five miles an hour without losing her flying speed?"

"Just about that," said Joe, after a moment's thought.

"All right," said Andy, "we'll give him ten miles an hour more, just to be on the safe side." Then, turning to the operator: "Tell Sonny to get his 'chute on and then go into the control room. Tell him to move the four throttles forward a tiny bit at a time, watching the air speed indicator each time he has moved them a little. Tell him to take his time, not to hurry, and to stop closing the throttles when the air speed indicator shows the ship has slowed down to eighty miles an hour. Tell him if anything goes wrong and the ship begins to dive or to fall off on one wing, not to wait, but to bail out in his 'chute right away."

The young man with the ear phones nodded and his hand danced upon the sending key. Andy, Sam, and Joe waited in breathless silence.

"He's got the message," shouted the radio man. "Says he'll give us a flash when he comes back from the control room."

CHAPTER VI

SONNY AND SCOTTY, ALONE IN THE SKY

It was nearly five o'clock and the shadows of an early winter night were racing across the forest-covered mountains below. Joe, heading the cabin monoplane up through a hole in the cloud layer overhead, grimly snapped on the running lights on wing tips and rudder. It seemed to remind the other two that the *Apex* was heading into the lonely night with its helpless crew of boy and dog, roaring on and on at the mercy of two spinning tops in a new and almost untried device. If those gyroscopes should stop whirling, even for just a moment——

Andy produced an old envelope and a pencil from his pocket and began to figure. The *Apex,* he knew, had already flown a full hour at just less than two miles a minute. If Sonny managed to cut her down to

eighty miles an hour, how long would it take this cabin monoplane to catch her? He glanced at the air speed meter. She was still making one hundred and ten miles an hour. His pencil worked busily. Then he looked up, his face very grave.

"Listen, fellows," he said, "if nothing happens to slow us up, do you know what time we'll sight the *Apex?*"

"What time?" demanded both.

"Sometime between eleven o'clock tonight and midnight, provided we are able to pick her up without losing any time looking for her."

"Have we enough gas to last that long?" demanded Sam anxiously.

"Plenty," said Joe briefly. "This crate is loaded. We can fly a good ten hours at least. But what about the *Apex?*"

"She's all right," declared Sam, promptly. "With her speed cut down to eighty miles an hour, she'll go nearly to the Rockies before her tanks run dry."

"Where'll we be about midnight?" asked Sam.

Andy closed his eyes and remembered his charts.

"Depends on the strength of the wind and its direction," he said at last. "If there were no wind to speed us up or blow us from our course, we'd be somewhere in the Mississippi Valley, I think, just south of St. Louis."

Joe whistled softly.

"That's a long way to trust to those gyroscopes," he said.

The others said nothing. The monoplane climbed out of the encircling clouds and plunged ahead through a clear but fast-darkening sky. The first evening stars were beginning to shine in the gray dome overhead, and during occasional glimpses of the earth below the flyers could see lights appearing in scattered farmhouses and in villages which huddled in the deep-set valleys between the mountains.

"It's taking Sonny a long time to adjust those throttles," complained Sam nervously.

The others did not answer. Joe was look-

ing straight ahead, and Andy's eyes were fixed upon the face of the radio operator.

"I wish the other stations would keep off the air," said the latter. "Everyone in the world is crowding in. Never heard such a racket. Ah!"

For a few minutes his eyes were riveted to the boxlike set before him. Then he straightened up with a sigh of relief.

"Quick, what is it?" demanded Andy impatiently.

"It's all right," said the operator. "The kid's got it fixed. Says the air speed indicator reads exactly eighty miles an hour. Says he and the dog are quite comfortable, and that after a while they'll go into the galley and cook themselves something to eat."

"Can you beat that?" marveled Sam. "There he is, not knowing from one minute to the next what's going to happen to him, going to cook himself a meal! I never——"

"Tell him to switch on the running lights," directed Andy. "The switch is directly in front of the left-hand control wheel. And ask him if he is still wearing

his 'chute pack. Tell him I'll skin him alive if he takes it off for a single second."

After three or four age-long minutes the radio man laughed.

"The lights are on," he said. "Sonny sends Andy Lane his compliments and says that since he is now the captain of the *Apex,* he has the privilege of wearing his parachute or not, as he sees fit. But, as a matter of fact, he is wearing it."

"Spunky kid!" grunted Joe. "Good little kid. Never saw a youngster I liked so well."

"Here's something more," called the operator. "Sonny asks when we are going to catch up with him?"

"About midnight," replied Andy.

Then, after a moment: "He says it'll be fine having company flying along beside him, and he'll enjoy looking out of the window and seeing us. But he wants to know what we are going to do about it when we get there."

"Tell him I'll come aboard," snapped Andy.

Sam and Joe cast quick glances at the young captain, but said not a word.

"Here's a flash from a ground station," said the radio man. "Everybody on the ground is watching the sky. A little town about thirty miles north of Lynchburg reports having seen a big plane flying very high a few minutes ago. It was heading west."

"If that was Sonny," said Andy, "he's being blown to the north of west. There must be a south wind. Send a message to someone on the ground near here who can tell us how the wind is blowing."

It was now quite dark. Joe had switched on the lights of the panel board and was flying entirely by instruments. The cabin was cold, but the flyers did not realize it, so worried were they about the boy who had been their companion on so many flights. They just sat there silent and miserable, their eyes wandering from clock to air speed meter and then to the blackness of the sky ahead.

"Lynchburg says there's a twenty-mile

wind," announced the operator, "blowing almost directly from the south."

Andy nodded silently and resumed his moody staring out of the window.

"People on the ground are certainly upset," said the radio man. "When I dial up into the broadcast range I can hear about a dozen stations on the air all giving news bulletins about the missing ship. Gee, you ought to listen! Sonny Collins is now talking directly to a man named Avery at the Apex factory at Mineola, New York. He is telling this man not to worry, that everything is all right because Andy Lane will come aboard and take control in a little while.

"Now there's another man at the Mineola set. It's Sonny's father. Gee, that kid's got nerve! He sounds as chipper as a cricket. He's telling his father the *Apex* is flying just as smoothly as though Andy himself were at the controls. Says all the lights in the cabins are on and that everything is just as comfortable and homelike as it can be, and that this accident will really be a

good thing because it will advertise the reliability of the Apex automatic control. He's telling his father that he was pretty scared when he went out into the control room and didn't find anybody there. He thought everybody had fallen out when he found the door unlatched, and for a little while he felt pretty low. Then he figured he'd just go into his own cabin and think things over because there didn't seem to be anything else to do. Then, to sort of take his mind off his troubles, he got to working the radio set. He got our message, relayed through the broadcasting station, that told him we were getting a plane ready to chase him, and after a while heard that Andy was all right. Then he felt better. Now he is perfectly sure that we'll find some way to rescue him and the plane. He's worried about the plane. He knows he could take the dog under his arm and jump overboard, but he won't leave the plane until he is sure nothing can be done to save it."

"Can you imagine that?" whispered Sam.

"His father is telling him," the operator went on, "that he and Mr. Avery are getting a pursuit plane ready and will cut straight 'cross country to be near the boy. He says there is an Apex pursuit plane that can go nearly two hundred miles an hour and that the factory mechanics are right now fitting a short-wave radio set in it so they can keep in touch with things while they are flying."

That was like Sonny's father, Andy thought. He had once been an airplane manufacturer himself, a close rival of Mr. Avery's. But when Sonny began to fly with Andy in Apex planes, Mr. Collins and Mr. Avery had become friends and had, at last, combined their two businesses into one. No one knew better than Andy how Mr. Collins worried about his young son during the long and often hazardous flights. But the older man had realized that Sonny, despite his age, was as useful as a grown man and had never tried to prevent him from becoming a permanent member of the world-famous *Apex* crew.

On and on flew the cabin monoplane

through the night. Reports from occasional towns along the way indicated that the tiny lights of the *Apex* had been seen from the ground. Sonny's radio spluttered into life from time to time, reporting that the big ship was droning steadily along over rivers, mountains, and towns.

The whole world seemed alive to the drama that was going on in the black skies. Whenever Andy Lane and his daring crews took the air nearly every broadcasting station in the country issued bulletins to the waiting public at frequent intervals. Now the listeners' excitement was intense. Millions and millions of people were sitting in front of their loud speakers listening to the minute-by-minute news of their heroes' thrilling chase. Not since Andy and his crew had been swept through a tropical hurricane in a careening autogyro had the radio listeners been so worried.[1] They know all about Sonny Collins, for it was always he who kept them in touch with the progress of Apex ships through one exciting flight

[1] See "The Flying Windmill."

after another. And few people indeed would be content to go to bed this night until they were assured of the boy's safety.

"Now I know who that Borokoff bird was!" exclaimed Sam, sitting bolt upright. "I knew I'd seen him before, but I've been so busy worrying about Sonny, I haven't had time to remember him."

"Who was he?" demanded Andy grimly. "I'd like to get my two hands on his neck!"

"Listen; three or four weeks ago a ratty-looking Russian with long black whiskers and a walrus mustache came to the factory and said he had heard we were developing a wonderful Diesel engine and a doo-hickey that would operate the ship in the air. He said he represented a bunch of men with oodles of money and would like to see a ship with these improvements on it. The new *Apex* was in the hangar then, getting ready for her first short air tests. You and Joe were off on a hop somewhere in your private monoplane, so Mr. Avery and Sonny's father interviewed the bird. They took him out into the hangar and introduced him to

me. We were just about to take him aboard the ship and show him everything when it suddenly developed that he was thinking of buying the engines and the 'Iron Mikes' for the Soviet Government in Russia. Yes, sir, he was a full-blown Bolshevik, and you know, both Mr. Avery and Mr. Collins have hated Communists ever since they started a strike in our factory a year ago. So they refused to show him the ship and gave him the air. Wouldn't have another thing to do with him. Sweet sister, but he was mad! He just stood there at the door and sputtered. Told them that the Communists would own the world some day and that the Soviet would buy planes from someone else, planes that were better than ours anyway. Said that some day a Soviet plane would fly over Mineola and give the Apex factory a good lesson. Probably meant that they'd drop bombs on us. I wouldn't put it above them either."

"Why didn't you recognize him when he climbed aboard at Richmond?" demanded Joe.

"Didn't I tell you that his face was all hidden behind bushes?" said Sam. "He'd shaved off his whiskers and beard; that's why I didn't recognize him. There was something familiar about his eyes and his accent, but everything happened so fast that there wasn't time to think it over. He just walked into the plane and then, phooie, he'd given her the gun!"

"Pretty smart, coming way down here to Richmond when the papers announced we were going to make our big hop to the south," said Andy. "Was his name Borokoff when he visited the factory?"

"No. I can't remember what it was. It sounded like a man trying to talk and eat three yards of spaghetti at the same time. I couldn't pronounce it if I could remember it. But it wasn't Borokoff."

"The Hotchkiss Airplane Company, out in Wichita, Kansas, has had a bad experience with the Communists," said Joe. "They've developed a way of changing the pitch of the wings in flight that beats anything there is. Their chief test pilot was

telling me that six months ago they sold one of their planes to a Russian. A little while ago they ran across a photo in the newspapers of a squadron of Soviet planes at the Moscow airport, and every single one of 'em was equipped with the Hotchkiss gear. Talk about swiping patents without paying for them!"

"The *Apex* has been sighted over Hinton, West Virginia," called the operator.

"We're both flying over bad country," muttered Andy, uneasily. "These mountains below us run up to nearly five thousand feet. We'd sure have been in a thin way if that Russian hadn't climbed the *Apex* to nine thousand feet before turning on 'Iron Mike'!"

"Just got another message from the kid," said the operator. "He's going to be off the air for a little while and says not to worry about him. He's going to cook some supper for himself and the pup."

CHAPTER VII

ANDY TO THE RESCUE

ELEVEN o'clock. A half-moon, casting its glittering silver light across the black prairies of southern Illinois, shone coldly on the gleaming wings of a squadron of airplanes flying high in the darkness of the night. On the ground, people who were usually asleep long before now stood outside their farmhouses and in the streets of their villages eagerly staring upward at the lights on the planes, then hastened back to their radio sets to hear their announcers broadcast details of the thrilling drama overhead.

In one of the roaring planes sat Andy, Joe, Sam, and the radio operator grimly preparing for the final effort at rescue. In another, Sonny's father and Mr. Avery, president of the Apex company, sat shivering in an open cockpit, staring across fifty

feet of air at the *Apex* and listening, through their ear phones, to the curt messages passing between Sonny and Andy. Not far away a tri-motored, all-metal passenger plane droned along, carrying within its great fuselage a dozen newspaper reporters and a radio announcer who was describing to the world every detail of the daring effort to save Sonny, Scotty, and the great plane.

This ship, together with two army planes, had hastened on from Dayton, Ohio, when word had come over the radio that the *Apex's* lonely flight would take it within cruising radius of the Ohio air field. The swift little one-place army ships cruised round and round the aerial procession, anxious to be of assistance, but powerless to do anything except possibly to dive after Sonny and watch his landing if it became necessary for him to jump out of the *Apex*.

As the gleaming, winding expanse of the Mississippi came into sight far in the distance ahead, a large biplane from Lambert-St. Louis Field joined the group, carrying with it a crew of picked dare-devils ready

to take any chance in order to be of service to the brave boy who was the sole human passenger of the great ship which was droning ever westward under the automatic, but brainless, control of its spinning gyroscopes.

Now, after many, many hours of heart-breaking pursuit, the moment for action had come. The four occupants of the cabin monoplane were getting ready. And for the moment there was a dispute, the first there had ever been between Andy and the members of his crew.

"I tell you, Andy Lane," said Joe quietly "I'm not going to have you make that change. I'm going to do it myself."

"Listen, fellows," said Sam eagerly, "I may be fat and all that, but I'm the one to do it. Don't I go crawling out on those catwalks on every trip we make? You're both fine flyers, but neither of you know your way around on the outside of an Apex ship like I do. Let me make it, please!"

Andy shook his head briefly and rose, walking between the seats toward the door

of the plane. Then he turned to the radio operator.

"Ask the other planes to keep out of the way, please," he said. "I don't want them to rock either this plane or the *Apex* in their slipstreams. Then ask Sonny to leave his set and stand by at the port-side cabin door so he can open it for me."

"Andy!" roared Sam. "Aren't you going to put on a parachute"

"Can't do it, Sam," replied the boy. "It'll be in my way. I don't want anything to bother me. All right now, Joe; steer straight over the *Apex*. I'll be hanging on the undercarriage and you let me down as close as you can to a point over the port wing, about halfway between the engines and the cabin. "Let's go."

Sam, his fat knees shaking with honest fright, held the cabin door open while Andy, swinging out into the terrific wind, grasped a wing strut and began to lower himself down toward the left wheel.

For an instant the icy blast took Andy's

breath away. It seemed to stab through his clothes like a million red-hot needles. He hung on tightly and glanced downward to gauge his distance from the dangling wheel. The great black bowl of the earth, nearly two miles below, was split in half by the glistening surface of the Mississippi River. The curving stream, more than half a mile wide, seemed to have shrunk until it was hardly more than a brook. Brilliant clusters of lights at its banks marked towns where thousands of people stood in the streets hoping to catch a glimpse of the hurtling fleet of planes so high overhead.

Andy squirmed his way down the smooth strut, feeling with his feet for the touch of the thick balloon tire below. He found it and rested, looking around for the *Apex*. There it was, just to the left. It appeared to be sinking and drawing nearer. Its glowing line of round portholes looked very homelike and comfortable to the boy who clung to his slender strut over two miles of cold night air. He looked for the square glass of the cabin door. Yes, there was

Sonny, looking terribly small and lonely as he stared eagerly out into the darkness. Andy had an impulse to wave encouragement to him, but even if the lad could have seen his gesture, he would not have dared take one hand from the strut.

The *Apex* seemed to be still sinking as Joe, in the cabin plane, climbed. Andy watched the brilliantly lighted windows of the mammoth ship go lower and lower and then begin to foreshorten as the great single wing slid slowly beneath him.

The force of the cold night wind was unbelievable. It seemed possessed of a million fingers, each of which was trying to tear him loose from that strut. The gale shrieked around the wires and struts of his ship, joined with the ear-splitting thunder of a dozen powerful engines to make one gigantic sound that beat against Andy's body like a score of padded drumsticks. The night was filled with noise. Noise and cold wind and flaming engines. It was a nightmare from which Andy would soon wake in a cold perspiration of horror.

Now the widespread wing of the *Apex,* gleaming in the moonlight as though it had been hammered out of solid silver, was slipping into position. Andy stared down at it, studying its smooth, rounded outline in hope of finding some place where clutching hands might find a grip. The square trapdoor in the center, where refueling operations were carried on, was closed flush with the smooth doped fabric of the wing covering. No handhold there. Along the curved surface of the leading edge was a thin black line which looked as though it might have been drawn there with a ruler and hard-leaded pencil. At regular intervals along the ruled line were round black dots. Andy stared at it for some moments before he recognized it. Then his heart beat faster. It was the radio aerial, held some eight or ten inches above the doped fabric by glass insulators. That might give him something to hold on to. If not, if he should miss that thin strand of wire, his clutching fingers would slide across the smooth surface while

he was blown helplessly back over the trailing edge!

Upon the impulse of a moment he carefully held on to the strut with clinging arms and legs and, letting go with one hand, reached for the jackknife in his pocket. He wrenched the large blade open with his teeth, then held the handle between his teeth, as did the pirates of old when they were boarding a captured ship.

The ships were almost in position now. The *Apex,* heavier than the cabin monoplane, was plowing steadily through the night air. Joe, sitting tensely behind his stick, was exerting every atom of his airman's knowledge and experience to keep his lighter craft from rising, falling and yawing in the uneven air currents blowing from the river and the mountains to the south. But despite his best efforts, the wheel was sometimes twenty feet above the *Apex's* left wing, sometimes almost touching it, as he carefully jockeyed into position.

Andy, poised and ready, saw the fanlike

arc of the forward propeller just beneath him. If the plane should drop at this moment, that revolving propeller would end everything instantly. But Joe, too, had seen the danger and had pressed lightly on his rudder pedal. For an instant the wheel hung poised over the smooth wing, exactly where it should be. Andy held his breath and jumped, arm and legs outstretched and clawing at the empty air. The six-foot fall seemed to take forever. He seemed to be suspended there, between wheel and wing, while the two planes roared on and on through the numbing cold of the night.

And then the smooth, glistening fabric came up and hit him. His hands clutched for the radio aerial, just an inch or two from his finger tips. He had missed it! As fast as light his right hand darted for the knife between his teeth, grabbed the handle, and stabbed the heavy blade straight down through the fabric. The heavy linen held. The knife anchored him against the hurricane of wind that was trying to sweep him away. He remained there for a moment

stretched out flat on the slippery surface, not daring to move lest he pull the knife loose from its hold. Then, moving with infinite care, he pulled himself toward the knife and toward the radio aerial. When his strong fingers closed around the strand of braided copper wire he lay still for another long moment, almost too weak to move.

The din of the accompanying airplane engines beat in his ears. The biting cold of the wind ate into his bones. He found that he did not want to move. It would be so much easier to just stay here. He remembered now that his head still ached from the Russian's blow. Every bone and muscle in his body ached. His clothes were still damp from his parachute fall into the river. He felt sick and miserable.

And then suddenly he remembered Sonny. Sonny was just below him, waiting anxiously for him in the warm, comfortable cabin down there, probably worried because Andy hadn't appeared before now. It wasn't fair to worry Sonny like that. The youngster had faith in Andy, had never

doubted Andy's ability to pull him out of any kind of difficulty. He knew he must get down to Sonny and Scotty immediately and not keep them waiting.

Slowly, an inch at a time, he pulled his body against the eighty-mile-an-hour gale that swept over the leading edge of the wing. The open knife was again between his teeth; there was no telling whether or not the radio aerial would hold his weight. Another inch and another. The entire sky seemed filled with black airplanes, whose riding lights danced about like red and green fireflies. Never had he known such noise as that made by all those engines.

His eyes were now level with the forward edge of the wing. He was looking straight toward the black ground two miles below. But he did not see it. His gaze was fixed upon the dark silhouette of the catwalk which led from the engines to the lighted doorway of the cabin. Where was the strut which led down from the wing to the catwalk to support it against Sam's weight?

Ah, there it was! Joe had dropped him within two feet of it. Now to work himself over the leading edge and to grab that strut before he went plummeting down to the ground. Slowly, carefully, Andy worked his body around on that slippery wing surface until his feet now extended over the edge. Long, bitter cold minutes passed as he edged himself backward over the rounded surface, waving his feet about until at last his legs found and wrapped themselves around the strut. Then, his knees clinging tightly, he slipped over the forward edge of the wing and clutched the struts with his hands. The wind tore at him viciously, but he held on with the strength of desperation until at last he felt the rigid surface of the catwalk beneath him.

In another moment he was standing on that narrow gangway clutching the railing with both hands as he staggered toward the cabin door. There was Sonny's face, outlined against the lighted interior! Andy grinned at him, forgetting that Sonny could

not see his face in the dark. Then his hand was on the knob. Sonny was opening the door from the inside.

"Hello, kid," said Andy, giving his little friend a tremendous slap on the back. "You've had quite a ride, haven't you?"

As the door closed behind him, Andy was nearly hurled from his feet by a leaping whining, tail-wagging dog who was in a perfect frenzy of joy to see his master again.

"Down, Scotty," laughed Andy, patting the collie's head. "If you knock me over, I'll never be able to get up."

"I was never so glad to see anyone in my life!" exclaimed Sonny taking off his great horn-rimmed glasses and wiping them. "But I wasn't scared—that is, not *very* scared, after I knew you were all right. I was sure you'd find some way of getting to us."

"We sure would, ivory head," Andy assured him. "Now we must get to work." He stopped for a moment, deep in thought. Then: "Sonny, get your static box to work and tell the millions of planes that are

crowding us to keep out of the way while I turn the ship toward St. Louis. That's the nearest good airport. Tell Sam and Joe that I'll put the bus down at Lambert–St. Louis Field so they can come aboard. Let's go."

CHAPTER VII.

BACK IN THE "APEX" AGAIN

NEVER had anything looked half so comfortable as the cabins of the *Apex*. The lights flooded them with brilliance. The electric heaters glowed warmly. The chintz-covered wicker chairs seemed to invite the tired Andy to sit down and to fall asleep. But he resolutely marched through the corridor to the dark control room, where the soft lights in the instrument board furnished the only illumination.

He slipped into one of the pilots' seats. Scotty, who had followed him, immediately climbed into the other and sat down, staring up into his master's face with eyes that seemed faintly reproachful. He, too, had worried about his master and seemed to ask Andy not to leave him again. The young flyer stroked the brown fur for a moment, then, glancing about at the position of the

other airplanes, gripped the control wheel and switched off the faithful gyroscopes.

It was good to be actually piloting again. As the great ship responded to the pressure of his hands on the wheel and his feet on the rudder pedals, all of Andy's cares seemed to drop from his shoulders. Everything that had happened since they had made that fateful landing at Richmond, nearly seven hundred miles to the eastward, seemed to belong to some previous flight, like the fight with the air bandits near the coast of Africa.[1] Now everything was all right. He was at the control of a giant Apex ship, where he was as much at home as if he were in his own room in the big house at Hillside. The plane was flying well. The dials upon the instrument board were all giving him their friendly messages. Andy drew a deep breath of contentment.

The other planes had turned and were heading north. Andy banked the big *Apex* over on her right wing tip and followed them, heading straight toward a dull red

[1] See "The Mysterious Monoplane."

glow in the sky which, he knew, marked the city of St. Louis.

"Gee, Andy," exclaimed Sonny, coming into the room, "you ought to hear the messages that are coming in! Dad and Mr. Avery say they're never seen anything finer than the way you got aboard here. They say that before this everything you've done has been so far away from the Apex factory that they've never seen you in action. They can't wait for you to land so they can tell you what they really think of you! Sam and Joe send word that they'll meet you at the St. Louis airport. They have a hunch there'll be a crowd there, so they've given their ship the gun to speed on ahead and look things over. They want to make sure the field is clear for our landing. The radio announcer in the big tri-motor alongside is nearly blowing out the tubes in his set telling the world what a wonderful bird Andy Lane is. He says that both the Red and Blue networks of broadcasting stations have been hooked up to his description of the past hour's events. He says one of the

army planes out there turned thirty-three loops to celebrate when they finally saw you get safely inside the cabin here."

A worried expression appeared on Andy's face.

"I'm trying to remember how far Lambert–St. Louis Field is from the city," he said slowly. "I have it—its about twenty miles. It's midnight now, and I guess everything's all right. It's too far from St. Louis for many people to be out there. Boy, howdy! For a minute I was afraid they'd try to have some kind of celebration, but I guess there's no danger at this time of night."

Sonny said nothing, but his expression was very doubtful. He had flown often enough with his older friend to know that whenever Andy Lane landed there was usually a crowd to meet him. Now, after an evening of thrills like this, Sonny suspected that the roads leading out of St. Louis would be jammed with cars heading for the field where, according to the radio broadcasters, Andy would soon land the *Apex*.

Suddenly Andy began to laugh.

"Just imagine," he chuckled, "how hungry Sam is by this time! I'll bet he was beginning to think of dinner about the time we were landing at the Richmond airport. He's been too scared to think about his stomach for the past five hours, but now that he knows we're all safe, it will all hit him at once! He'll he tearing his hair out in great big handfuls!"

"I suppose they'll be able to find something for us to eat at the field," suggested Sonny.

Andy straightened up in instant alarm.

"Good night, no! Let's get Sam and Joe aboard and beat it as soon as we can. We have enough fresh food in the galley for a couple of days and Sam'll be tickled to death to cook a ten-course dinner. If we eat at the field, someone will be sure to start a celebration." Then, after a moment's hesitation: "But I suppose your dad will be disappointed if we don't stop there very long, won't he? After the scare he's had,

he'll probably want to spend some time with you."

"Not if it interferes with the flight," said Sonny, positively. "It's only been about twelve hours since I saw him at Mineola, you know. But I must get back to my set. Everybody in the world is probably trying to get us. I'll talk to Dad and see what he says."

The winking red and green running lights of the accompanying aerial fleet were heading slightly to the west of the great city on the Mississippi. Andy, lounging, relaxed comfortably in his pilot's chair, was content to follow them without bothering to worry about his own navigation. The millions of lights of St. Louis were to his right, the scattered towns and villages of St. Louis County directly beneath and ahead. The long, swinging beam of an aerial beacon directly in front of the bow marked the landing field at Anglum, where previous Apex ships had stopped on some of their record-breaking hops. Andy found himself

staring down toward the source of that aerial beacon, anxious to catch the first glimpse of the flood-lighted field to see if a crowd had gathered there.

Sonny ran into the control room, his voice very excited.

"Listen, Andy," he shouted, "Sam says the field is jammed with people! He says if we land there, we'll be lucky if we get away before morning. He has a bright idea. He and Joe have just landed there and have borrowed a rope ladder from a stunt flyer. He says that if I'll open the trapdoor in the wing where the refueling pipes are, he and Joe will climb down their rope ladder and come aboard. It'll be a cinch doing it that way, he says, and will allow us to go on without landing. He says the Apex agent at the field has offered to send up a refueling plane to fill up our tanks. Both he and Joe say that we started out on a nonstop flight and that even if we did have to land at Richmond, there's no use landing every mile or two for this and that."

Andy was delighted. To flyers as expe-

rienced as Sam and Joe there would be no danger in climbing down a rope ladder to the wide trapdoor built in the upper wing of the *Apex* to receive the hose pipes during refueling operations. It would even be easier than in previous ships, where a refueling cockpit had been constructed in the extreme bow. And it certainly was a temptation not to land with that crowd waiting to swarm on to the field.

"Have you asked your father and Mr. Avery?" he asked. "After all, they're our bosses, you know, particularly when they're right on the spot."

"Just a minute," replied Sonny. "I'll see what they say."

He ran back toward his cabin; while the *Apex* roared ahead toward a great rectangular pool of light carved out of the darkness of the countryside. It was evident that plans had been made to receive the famous *Apex* and her squadron of accompanying airplanes. Floodlights from the pylons at the edge of the tarmac made the runways more brilliant than at high noon. Great

searchlights mounted upon the roofs of the long line of hangars poured their dazzling incandescence into the safest places for landing. Hundreds of cars were drawn up at the sides in solid ranks of black, while others formed an endless procession of crawling lights strung along every road leading to the airport.

As the *Apex* approached the field the other airplanes wheeled away in wide circles, that nothing might interfere with Andy's glide to a landing. Even though he hoped that a landing would not be necessary, Andy felt that he owed a view of the *Apex* to the people who had gathered to see it, so he closed his throttle and put her into a long, thin glide, descending in a series of sweeping spirals toward the thousands of upturned faces upon the ground.

"Dad says 'more power to us,' Andy," called Sonny, joining his friend in the darkened control room. He says to tell you that the first orders for the flight still stand. Give the *Apex* as long a test as you want. Stay up as long as you wish, and fly wher-

ever your fancy takes you. Mr. Avery says he'll see us all when we get back to New York and then he'll buy us the biggest meal that can be found in the United States.

"Sam and Joe have landed," he went on breathlessly. "They're in a hangar down there getting the refueling plane ready. They say if you'll fly around for a few minutes more, they'll come aboard with the oil and supplies."

"Good!" nodded Andy, still steering the idling monoplane down, down, in its slow, easy spiral. "Tell them to take all the time they need. And then tell your father that everything aboard the ship here is in perfect shape. If Sam and Joe agree, we'll start to-night for Central America and finish our test down there in the warm weather. Tell them we'll fly the plane over Mexico City to help the export department in its work. Ask him to have the Apex agent in Mexico City send up a refueling plane when we radio him that we're near by. After you've sent those messages you'd better stand by at the trapdoor in the wing so that

Sam and Joe won't have to skate aboard as I did."

Sonny, now completely happy, raced for his set. Andy opened the throttles and straightened out at an altitude of a thousand feet, roaring across field and hangars to permit the spectators to have a full view of the plane whose exploits had so thrilled them. The insulated cabins kept out all noise from the ground, but Andy knew that the people down there were cheering lustily. The white lights from the landing field showed thousands of people waving their hands at the thundering *Apex*. Andy acknowledged their cheers by dipping his ship three times, then zooming high into the night air to await the refueling plane, which was even now rolling out of one of the hangars and scuttling across the blinding light of the airport.

Swiftly the tri-motored refueling ship climbed into the air over the flying field. Andy, anxious to repay the crowds for coming to the airport and to make up for their disappointment in not seeing him land, resolved to conduct the refueling directly

overhead, where they might have an opportunity to watch the entire operation. So he worked the *Apex* up to four thousand feet and then circled slowly around the lighted limits of the port, waiting for the heavily-loaded tri-motor to catch up with him.

Exactly over the center of the field, and in full view of the spellbound thousands on the ground, Andy slowed his engine and watched the refueling ship slowly make its way directly over his wing. The larger *Apex* held a steady course, enabling the smaller tri-motor to maneuver into position until its windowed fuselage was directly over the center panel of the *Apex*'s wing.

Sonny, dropping the trapdoor of the wing, stood in a large square opening, his head and shoulders exposed to the wintry wind, watching the other plane come into position. Something dropped from the open cabin door of the tri-motor. It was a rope ladder swinging back in the slipstream of the two planes. The pilot of the refueling plane jockeyed his ship carefully until Sonny was able to grasp one of the wooden rungs of the

ladder. Then the two ships kept their place, the upper plane's wheels almost touching the whirling arcs of the *Apex's* propellers.

Then, in the open cabin door of the refueling plane appeared a very stout figure, who stared down through the darkness to the square trapdoor in the wing below. With obvious reluctance Sam Allen turned his huge bulk and began to climb down the swaying rungs of the rope ladder, until at last he almost fell into Sonny Collins' slender arms.

"Sonny, you good-for-nothing, addle-pated, knock-kneed static hound," he roared in mock anger, "how dare you give us such a scare! As soon as I get warm I'll tear you limb from limb! And now watch out, here comes that dim-wit Joe Lamson. Hang on now or we'll spill him all over the airport."

The compact, well-muscled figure of Joe Lamson came down the ladder without the slightest hesitation and dropped lightly through the trapdoor. Joe's greeting was typical of him.

"Hello, kid," he said simply. "Glad you didn't have to use the umbrella."

And with that Joe clambered down to the cabin and made his way forward to join Andy in the control room. Quite without visible emotion the two comrades greeted each other.

"Nice work, old-timer," said Joe, standing at the window where he could watch the great black underbody of the refueling ship.

"Thanks," said Andy briefly, without taking his eyes from the swaying hull overhead. "No job at all."

Sam, immediately on the job as though he had never been away from it for a moment, waved his arms to a man who stood in the cabin door of the tri-motor. Immediately a snakelike hose dropped from the upper ship. Sam seized the nozzle, jammed it into the funnel-shaped top of a pipe that projected from the floor, and squeezed a lever. Immediately the hose began to vibrate as gallon after gallon of fuel oil began to flow from the tanks of the upper plane to those of the lower.

"This pilot knows his job," shouted Sam to Sonny above the roar of the seven great engines. "He's the same one who refueled us here on the round-the-world race. Remember? He's on the Apex pay roll now. We keep a refueling plane here all the time, so many ships are copying our method of long-distance flying."

Sam's eyes darted from one to another of a series of gauges set close beside the intake pipe. As one tank showed full, he turned a tap beneath the gauge and allowed the fuel oil to pour into another.

"Having the refueling pipes in the wing here, instead of in the bow," called Sam, "is a great improvement. The other plane can see its position better, and there isn't so much chance for the hose pipe to get tangled with our propellers."

When the last of the gauges indicated that all the fuel tanks were full, Sam waved his arms. The thick hose was immediately withdrawn into the upper ship and another, scarcely thicker than a common garden hose, was let down. This Sam placed in a pipe

leading to the fresh-water tanks and again signaled when the gauge read "full." Thus the *Apex* was refueled in flight and now carried a total weight of fuel and water considerably greater than her engines could have lifted from the ground in a take-off.

Sam, with a gesture of satisfaction, waved good-by to the refueling pilot and closed the trapdoor. He and Sonny climbed down the ladder to the cabin floor. Suddenly Sonny felt himself seized in a mighty bear hug as Sam began to waltz him around and around the living room.

"Whoops, dearies!" yelled Sam. "Once again we waltz around, waltz around, waltz around! Ta te ta ta ta! You little solo flyer, you!" And then stopping, he stared owlishly at the younger boy, who was again polishing his big spectacles. "The very next time, Sonny Collins," he said, shaking a very fat forefinger, "that you go gallivanting off on a solo without Sam Allen, I'll wring your neck, if it's the last thing I do."

He broke into a loud but unmusical yodel and went galloping up the corridor toward

the control room, where he burst in on Andy, Joe, and the collie mascot like a tropic hurricane.

"Orders for dinner, ladies and gentlmen, not to forget a brown-and-white dog!"

Scotty, catching the spirit of the moment, barked in excitement and leaped to nip Sam's trouser legs. But just at that moment Andy banked the *Apex* hard over on her right wing tip to leave the airport and to head to the southwest. Sam, unprepared for the sudden tilting of the floor, staggered, tripped over Scotty, and fell headlong. Fat man and muscular dog went rolling, shouting and barking, until they slammed up against the wall. Sam untangled himself from Scotty and rose outraged.

"Just for that, Andy Lane, you'll have some oatmeal and cold milk for your dinner, while the rest of us have the biggest steak I can find in the kitchen! I ache all over. I bumped my nose out of whack, and Scotty bit a two-pound roast out of my calf."

Andy and Joe laughed for the first time in many hours. It needed Sam, with his horse-

play and complaining to make them forget the dangers and the terrors they had just gone through.

"Cheer up, Sam, old scout!" roared Andy. "Do you know where our bow is headed?"

"If it's headed the same way as my nose is bent," mourned Sam, "we won't be going anywhere. We'll just be looping the loop over this field until we all starve to death."

"We're going down into the hot countries," said Andy, "where you can get out and catwalk and look down on palms and banana trees——"

"Yes," interrupted Sam, refusing to be consoled, "and if I fall off the catwalk, one of those poisonous snakes will be down there standing right up on the tip of its tail waiting for me."

"But it'll never nip you," retorted Andy. "With all that fat on you, you'll bounce when you hit the ground. Yes, sir, you'll bounce like a rubber ball, and we'll scoop you up on the rebound."

"I'm a sensitive fellow," said Sam, crossly, "and my feelings are very easily

hurt. The only thing that will ease me now is to go out and get something ready to chew. So loosen up your belts, boys, and prepare to wrap yourselves around some good hot victuals."

So saying, he danced out of the room, caroling merrily, while Scotty, close at his heels, tried again and again to trip him up. Andy looked at Joe and grinned happily. Everything was as it should be.

"Where to now, Andy?" said Joe, his steady gray eyes showing his contentment.

"Head for Galveston, Texas, Joe," replied Andy, reaching for the navigation charts. "We're going to Mexico and points south!"

CHAPTER IX

THE FLIGHT IS RESUMED

In the course of thousands of hours in Apex planes Andy and his crew had eaten some merry meals together, but never had there been one so happy as that placed upon the table by the clownish Sam Allen while the giant monoplane roared over southern Missouri and northern Arkansas.

So well had the spinning gyroscopes done their duty during the early hours of the night that Andy, for once; insisted that the entire crew gather in the cozily lighted living room for a meal together, trusting "Iron Mike" to steer a safe course through the skies.

"For just this once," he said, when Sam had roared that dinner was ready, "we'll leave the old bus for an hour to fly herself. We'll have one celebration and then get

back to our regular routine. So come on, Joe, and let's eat."

They were all in the highest of spirits. They were again safely in the air and all together after a night of danger and of worry. They were headed for new countries, lands they had never looked down upon, and in each of them the lure of adventure and exploration was strong. They had all seen more of the world than is given to most young men, yet they had never tired of flying over new country and looked forward to seeing the countries of Central America with as much zest as though they had never traveled a mile from their birthplaces.

Sam, grinning like a gorgoyle, turkey-trotted back and forth from the galley, bringing one fragrant dish after another. A tremendous porterhouse steak, full two inches thick, a white and steaming mountain of mashed potatoes, a bowl of brown gravy, and tiny side dishes of brown and glistening salted almonds were placed before the famished boys, who fell to with an appetite that would have astonished youths whose

lives were spent indoors, sheltered from adventure and danger.

The enormous bone, well flanked by pieces of juicy red meat, was given to Scotty, who placed one clumsy white paw upon it and gnawed contentedly, utterly happy because he, too, was an adventurer and knew, somehow, that after a night of peril all was well aboard his aërial home.

From a loud speaker attached to the wall came the muted strains of dance music played by an orchestra in Memphis, Tennessee. So clearly did the music come in that the boys could even hear the shuffle of the dancers' feet and the noise of merry-making and laughter as the people swung past the microphone hundreds of miles away.

A huge dish of chocolate ice cream and a thickly frosted chocolate cake ended the meal and left the boys almost too stuffed to move away from the table. Sonny Collins, who had been yawning ever since he had finished his last slice of steak, had to shake

his head and blink his eyes repeatedly to remain awake.

"It's you for the hay, young man," said Andy severely. "We've had a big day and it's time to settle down now and get into our regular routine. If we don't, the first thing you know we'll have to land somewhere just so we can all catch up on our sleep. We're due over Galveston, Texas, about seven in the morning, and then we'll have a long water jump over the northwestern corner of the Gulf to Tampico, Mexico. So, Sonny, you beat it and pound your ear."

Sonny, who would have protested that he wished to remain on duty, ducked as Sam scooped up a spoonful of ice cream and threatened to throw it at him.

"I'll give you until I count three, you static hound," said Sam. "And then if you're still here, I'll skin you alive!"

Sonny impolitely stuck out his tongue at Sam, who lunged for him with two outstretched hands which were as large as elephants' ears. But by the time Sam had eased his tremendous bulk out of his chair,

Sonny had raced down the corridor to his room, where he took revenge on the others by doing something to the radio which made the loud speaker howl like a thousand fighting cats. Then he switched off the set and fell into his bed, where he was asleep almost before his head touched the pillow.

"You're next, Andy," said Joe. "Before all this excitement started, I took a nap so I'd be in shape for the first night watch."

"All right," agreed Andy. "Wake me at four in the morning. Then it'll be your turn to sleep until eight."

Sam rose with a heartfelt sigh. He stepped to the locker and removed his fur-lined coveralls.

"Pretty soft for you birds," he grumbled. "But me, I've got to climb out on the thin edge of nothing and baby those engines of mine. They've been left alone so long already it's a wonder they haven't become sulky and peevish. The only thing that makes life worth while is the knowledge that the next time I have to climb out on that catwalk it'll be nice warm weather. Get up

in the control room, Joe, you old rubber-face, and turn the engines on and off when I give you the high sign."

Andy rose, yawned and stretched lustily.

"Come on, pup," he called to Scotty, who was drowsing with his chin on the polished bone. "Let's turn in."

Scotty wagged his bushy tail sleepily and tottered after his master to their cabin, where he immediately collapsed upon the floor beside the berth and began to dream of mountains of bones guarded by regiments of cats which spat at him whenever he approached the closest of the mountains. He twitched and kicked in his sleep, making faint growling and whining noises in his throat until finally, having chased all the cats away, he settled down and lay perfectly still.

Andy waiting only to take off his coat and shoes, lay down upon his comfortable berth and covered himself with a camel's hair blanket. For a few minutes he lay awake, feeling the gentle rocking of the ship and the hardly noticeable vibration of the en-

gines. It was good, dozing off in that homelike little cabin of his, while Joe kept watch through the miles of blackness. It did not occur to Andy that there was danger in the sky. It was, he thought sleepily, his proper element and the only satisfactory means of getting from one place to another. A good plane and a crew like Joe, Sam, and Sonny —what more could any boy want of the world?

It seemed as though he had just closed his eyes when he stirred, blinked, and glanced at the radium-painted dial of the clock set upon the wall of his stateroom. Ten minutes of four. He swung his legs over the edge of the berth and groped in the darkness for his shoes. He was due on watch in ten minutes, and he meant to be on time. This crew of his had just one fault—they could not be trusted to wake him up on time. More than once Joe Lamson had stood watch for hours after his turn was over rather than to pull Andy out of bed. So Andy had trained himself to wake up when the time came to take over the ship.

In that way alone could he be sure of sharing the night work evenly.

Scotty, yawning noisily, followed Andy through the corridor and into the dimly lighted control room. Outside it was still pitch-dark except for the millions of stars and the moon which had served them so well earlier in the night. "Iron Mike" was still droning away in his wooden box, while Joe stood at the window staring straight ahead in the darkness. He turned when he heard Andy's footsteps.

"Flying like a million dollars, Andy," he said quitely. "There's a little wind from the east, so I had to change the course two points to allow for the drift. But we're clinking off a hunderd miles an hour as regularly as a grandfather's clock."

"Where are we now?" asked Andy, glancing at the compass.

"Still in Arkansas. We flew over Little Rock at three o'clock. We're almost over the northwest corner of Louisiana. Ought to pass just to the east of Shreveport in about three quarters of an hour and about

five-fifteen hit the border of Texas. The way we're flying now, we'll make Galveston at almost exactly seven o'clock."

Andy nodded and took his place at the window as Joe, relieved from duty, paused to stroke Scotty's silky head.

"Not a bad life, is it Joe?" smiled Andy, glancing down at the long moon shadows on the ground.

"I'll say it isn't," said Sam, coming into the control room at that moment. "The only thing about it that worries me is the fact that we are being paid for having the time of our lives. As a matter of fact, we ought to pay the factory about a hundred dollars a day for the privilege of making these trips. Instead of that the money we've made in Apex planes is simply scandalous. Why, we're all rich, think of that! Prize money, salary and everything; just for having a good time! Now and then I pinch myself to see if it is all really true. Me, Sam Allen, rich and getting richer all the time! I've invested most of my prize money in stock of the Apex factory, and the company is

making money hand over fist. 'Samuel,' I say to myself, 'you'll wake up some day, so have a good time while you are young, happy and good-looking.' "

"Good-looking!" roared Andy. "If you'd work hard enough to knock about two hundred pounds off your bones, you'd still be too fat to be beautiful."

"Now you're hurting my feelings again," complained Sam. "So the only way to get even is to go to bed. If I stay up any longer, I'll be getting hungry again. Come on, Joseph, we'll turn in and leave Andy here all alone."

Andy watched them go and then turned back to his window. The *Apex* had passed beyond the foothills of the mountains and was now flying over low, flat country where for miles and miles there was not a single light to be seen upon the ground. Rivers, flowing ever southward to empty into the Red, gleamed in the moonlight like sluggish streams of molten lead. An occasional dark little village slid beneath the broad wing of the *Apex,* then a momentary glimpse of a

winding dirt road faintly etched against the black and silver shadows of the ground.

Presently the glow of Shreveport's street lights reddened the sky to the west, and the wide curves of the Red River stretched away beneath the plane. Another town, Mansfield, then the broad reaches of the Sabine River, marking the dividing line between Louisiana and Texas. And the false dawn began to turn the black of the night into an eerie gray. Andy watched it spellbound.

Little by little the sky to the east began to be painted in pink, sapphire, and turquoise. Four thousand feet below the swiftly moving *Apex* an early morning ground mist had formed, spreading out over the earth like a vast sheet, looking as solid as though one might walk upon its filmy top for endless miles, unaware of forests, plains, and rivers below. Far, far ahead was a narrow rim of the bluest blue, which, as the sun began to rise, shimmered and glittered as though its surface had been covered with billions of diamond chips. Andy stared at it eagerly,

knowing it to be the Gulf of Mexico, that great tropic sea bounded by the islands of the Caribbean and the sun-drenched coasts of North, Central, and South America. It would not be the first time that great Apex ships had cast the shadow of their wings on the sparkling blue waters of the Gulf, but Andy had been conscious of a distinct thrill every time he had looked upon its wave-bordered shores.

Just as the long bridge which connects Galveston Island with the mainland came into sight, Sonny came into the control room rubbing the sleep from his eyes. He stared down at the spider web of railroad tracks which lead to the great city and at the tremendous granite sea wall which protects Galveston from the terrific waves during a tropic hurricane. Then, glancing ahead at the knife-sharp horizon across the blue expanse of the Gulf, he looked at his friend and smiled contentedly.

"Another water jump, Andy? I thought you'd skirt around the edge of the Gulf instead of cutting across it."

"These *Apex* planes are more at home over the water than over land, Sonny," grinned Andy. "We're all anxious to get down into the heart of Central America, and we save considerable mileage by jumping across, rather than following, the long, sweeping curve of the Texas coast line."

"It sure seems good to be in the warm weather again," said Sonny.

Andy opened the side windows in the control room and reveled in the warm air which swept through the cabins. Between midnight and morning the monoplane had flown from winter to spring and then into summer.

"Sam sent me in to ask you whether you'd eat with the gang, as we did last night," said Sonny, "or whether you'd stay on watch until Joe got through."

"We're back on schedule now," replied Andy. "I'll stay here until I'm relieved. But tell Joe to take his time. I'm enjoying it out here. And by the way, Sonny, when you've finished your breakfast you might get in touch with Richmond and see if they have run across any signs of our dear old

pal Borokoff. I have a hankering to know what happened to him."

"So have I," agreed Sonny whole-heartedly. "I forgot to tell you, in all the excitement last night, but when I was taking that wild ride all by myself I talked with the newspaper office there. They told me that the police found your parachute on the bank of the river. They searched both sides of the river for hours and hours, but couldn't find any trace of the Russian. They think he must have gotten away."

"That's better than finding him dead," said Andy. "I hope to see that bird some day. He and I have much to talk over!"

"I'd like to shoot him!" declared Sonny vengefully.

"I wouldn't do that," smiled Andy, "but I'd sure like to smack him down!"

Sonny turned away from the glorious view of the water and left the room still muttering spitefully.

CHAPTER X

OVER THE MOUNTAINS OF MEXICO

"LAND HO!"

Sam's tremendous voice nearly splintered the glass dials on the instrument board as he pointed excitedly across the water to a faint blue line on the horizon ahead.

"Right you are, Fatty, the very first guess," laughed Andy. "Joe and I have been watching for it for the past half-hour."

All that morning the *Apex* had been droning ahead through warm, sunlit skies, eating up the miles toward Mexico. Routine aboard the great ship had gone on in its regular way, everybody very happy and contented now that they had reached the warm, balmy air of the tropics. Sam in light-weight coveralls had swarmed about his engines like an over-fat monkey, fiddling with them to his utter satisfaction, wiping

them and polishing them until they glittered blindingly in the direct rays of the sun. Sonny, to his intense excitement, had succeeded in exchanging radio signals with an amateur in Guatemala, and was as happy over finding a new friend of the ether as though he had won a first prize in a radio show. Joe and Andy had inspected the entire ship from stem to stern, traced all the braided wire control leads and made sure that the new ship had gone through her first twenty-four hours of flying without damage. So perfectly organized was the crew that each member knew his duties and performed them automatically, thoroughly, and without unnecessary conversation. Each knew he could trust the others. Thus there was a minimum amount of routine work. Now, having cleaned up the ship for the day, all four flyers were in the control room watching the mountains slowly lift their snow-capped heads over the horizon.

Immediately ahead was a long streamer of smoke which floated for miles in the gentle sweep of a southerly breeze.

"There's Tampico," Andy pointed out. "That smoke comes from the great oil refineries there. Most of the Mexican oil is shipped to America and to Europe in tank steamers from Tampico. We'll cut straight across the coast line a little south of the city. There are some mountains between twelve and eighteen thousand feet that we'll have to dodge around while we're flying over Mexico, so we'd better take as straight a line for Mexico City as we can."

He sat down in the pilot's seat, disconnected the gyroscopes and began to force the *Apex* up and up into higher, and colder, air. They crossed the shore line, looking down upon low-lying, marshy ground, thickly matted with lush green vegetation.

A few miles inland began the foothills of the mountains which extended ahead as far as the eye could reach to a jagged, saw-toothed horizon of peaks, many of which were capped with dazzling white snow.

Twelve thousand, thirteen thousand—still Andy kept the nose of the big ship up, open-

ing all four Diesel engines to their full horsepower to climb the faster.

By eleven-thirty they had reached an altitude of fifteen thousand feet and were looking down upon the bold, rocky summits of the lower mountains, but others stuck their white tops far higher than the plane.

"Sweet spirits of niter!" exclaimed Sam, glancing from the peak of one enormous mountain to the chart upon the instrument board. "Look at that big baby over there to the left and then listen to its name as I spell it. I-z-t-a-c-c-i-h-u-a-t-l. Doesn't that sound like a cat with hay fever? It's no runt either. Seventeen thousand-odd feet. And look, just beyond it! That, boys and girls, is Popocatepetl, which is still higher. I can pronounce that one because we used to have a rhyme about it in school. But I'd sure like to hear a fellow with false teeth and a stutter pronounce that Itchy one."

Andy, steering carefully, was having something of a job with the controls. Strong winds, cut into eddies and whirlpools by the passes through the mountains,

were tossing the *Apex* this way and that. Rising columns of air from fertile green valleys, would bounce the great ship five hundred feet upward in one terrific blast. In the next moment icy air blowing off a snow-clad peak would push her down with such force that the boys were almost knocked from their feet.

"Need any help, Andy?" asked Joe quietly.

"No, thanks," smiled Andy. "She's as light on the controls as a pursuit ship. We'll be over this range in a little while and then we'll see Mexico City. According to the chart, it's on a plateau about seven thousand four hundred feet above sea level."

After twenty more minutes of hard flying the *Apex* rounded a mountain spur and, at nearly sixteen thousand feet, flew through the ring of mountains which surrounded the ancient and beautiful capital city of Mexico.

"I'd better radio the refueling plane we're here," muttered Sonny, dashing for his cabin. In a moment he returned. "It's

in the air now," he said. "Do you see it?"

Just over the southeastern outskirts of the city they met the tank plane, a huge trimotored biplane belonging to the local agent of the Apex factory. Contact was swiftly made, and as the two planes droned across the lovely mirrorlike lakes that dotted the valley the tanks of the four-motored monoplane were filled with the precious fuel and water. Sam, standing in the trapdoor, signaled to the pilot above that the tanks were full, and cast away the water hose. Then from the open cabin door of the refueling plane two baskets were lowered on ropes. Sam received them thankfully and made a gesture as of shaking hands with the other crew. The Mexican pilot waved farewell and sheered off to glide back to his airport.

"Here," said Sam to Sonny, who had been watching the familiar operation, "are some fresh victuals, unless I'm a failure as a prophet. Ah, papa thought so! Who said that flying was hard work? Look, little one, rest your eyes on these baskets. Watch the

gentleman pull the rabbit out of the high silk hat!"

Chuckling happily to himself, Sam began to open the paper-wrapped packages within the baskets.

"Look, youngster," he called. "Here are four chickens, as I live and breathe! And such sweet fat little chickens they are, too! And what is this queer-looking substance? It looks like a Mexican's idea of a bean stew. But, no, Sonny, it is not a bean stew. It is the Mexican beefsteak, chile con carne. And when you put the first mouthful on your tongue you'll think you swallowed a three-alarm fire. Yes, sir. And here, young man, is a succulent dish. Hot tamales. And with the second mouthful your hair turns bright red, it's that hot. Oh, yes, they've been very thoughtful. In case our tongues aren't burned right out of our mouths, they've given us bread, butter—look, Sonny!—lamb chops, beafsteak, American style, bacon, and here, if I can tell by the feeling, is some real ice cream, all packed nice and cold in a cardboard carton. We'll have dessert first so it

won't melt, although we really ought to save it to cool off after the chile and hot tamales. Come on, let's get some plates. We'll have a look at Mexico City while we lap up the cream."

Carrying two trays of plates piled high with chocolate ice cream, Sam and Sonny went into the control room. Andy was still steering, for there were too many mountains about to leave the job to "Iron Mike."

"Hey," exclaimed Sam, "where's Mexico City?"

"Behind that last mountain," grinned Andy. "There was a thunderstorm sweeping in from the passes to the eastward, so we thought we'd be on our way before we had to fight some nasty squalls. Don't worry, though, you'll have plenty of chance to see the town on our way back."

"Where are we going now?" asked Sonny, passing a plate to Joe.

"We're going to cut across to the Pacific side," replied Andy, "and coast down past Guatemala, Salvador, and Nicaragua. It's usually good weather down there, and we

can play around until we get tired of it; then return north along the other side."

"Sounds like a Cook's tour," commented Joe dryly, finishing his ice cream and relieving Andy at the controls so that he might eat his ice cream. "But it's new country for us to see, so I'm all for it."

"Goody, goody!" chirped Sam, assuming a pose which he thought was graceful but which to the others looked like an elephant trying to stand on one leg, "I've always wanted to see bananas and coffee growing. Andy, show me some banana trees!"

"You'd better put on your parachute if you're going to jump around like that," advised Joe. "One more stamp of that steamer trunk you use for a foot and you'll go right down through the floor. And if you do, you'll cause an avalanche on these mountains here."

"Come on, Sonny," fussed Sam, "we aren't appreciated in here. You take the ice-cream dishes to the galley while I give my engines a look-see. Then we'll cook up a little bite to eat."

It was time for Andy to take a nap in order to be fresh for his night watches at the controls, but he could not bring himself to leave the control room, so wild, rugged, and ever-changing was the scenery below. Joe, at the wheel and rudder, steered the *Apex* through passes in the mountain ranges and along the winding courses of rivers. In spots the ground below was as arid and as desolate as the great deserts of America. Again, on the other side of a mountain, it was a dense, matted tangle of tropic underbrush. A strange, mysterious country, a land which had its civilization while Rome was young and which was old and wise when the Spaniards swept over it in the days of the Conquerors.

Just before three o'clock, while the four members of the crew were eating a picnic lunch in the control room, the *Apex* roared across the lower mountains of the Sierra Madre del Sur and they caught their first glimpse of the Pacific Ocean since their famous race around the world. A sweeping turn to the southeast brought them over the

long, sweeping lines of rollers beating in from ten thousand miles of sea. It was a magnificent sight. To their right the endless blue Pacific, beneath them the hard-packed black beach and the endless parallel lines of white-capped breakers. To the right the mountain range extended as far ahead as the eye could reach. The boys watched it in breathless wonder, never tired of its beauty.

Presently Andy forced himself to turn away from the window. He must take his nap, or he would pay for his lack of rest in long, eye-burning hours during the night when he would crave sleep above all things. Sonny, too, left the control room and went into his own cabin, where he began to tinker with his radio.

CHAPTER XI

THE VOLCANO

When Andy waked from his nap the sun was diving in a scarlet ball of flame toward the western horizon. He stared at it through his porthole in amazement. He had never seen it so beautiful. The sky was changing color with each passing instant. Greens, purples, and every shade of red chased across the veil of cirrus clouds that drifted high in the evening sky. The boy dashed for the control room to miss no moment of the gorgeous sight.

Joe was standing at the window gazing toward the sunset. The ship, again under the uncanny control of "Iron Mike," was flying over the ocean, out of sight of any land. Andy darted to the compass. Then he sighed with relief. For a moment he had wondered whether Joe had lost his mind and

had headed the ship for China. But the lubber line on the compass reassured him. The ship was headed South-southeast.

"Where are we, Joe?" he asked.

"Jumping across the Gulf of Tehauntepec," the pilot replied. "We're headed straight for the Mexican-Guatemalan border at the point where it reaches the Pacific. Land, the coast of Mexico, is about fifty miles off our left wing. We ought to make landfall again about nine-thirty to-night. But of course if anything goes wrong, we can turn hard left and hit the shore in half an hour or less."

It was already becoming dark. In the tropics there is no twilight. It is day, then it is night. The horizon to the left was already lost in the murk, that to the right still a hard line cutting across a riot of color. Andy and Joe watched it silently until the last pastel shade of pink faded out into blackness. Then Joe regretfully snapped on the running lights.

"Sonny's been beefing for the past couple of hours about his radio," he said.

"What's the matter with it?" asked Andy. "Something broken?"

"Static," replied Joe. "The kid's all upset because he was trying to get some interesting dope from Guatemala. Seems as though there's a volcano down there somewhere that's spilling over, and Sonny was fit to be tied when the static cut him off. And he was trying to signal the States, too. He says they have reported something about Borokoff."

"What did they report?" demanded Andy instantly.

"Sonny couldn't get it all. But there was something about a bird who looked like a Russian stealing a plane at Roanoke, Virginia. Probably was our friend trying to make a get-away from a country that was becoming too hot for him."

"Well, I'm glad we're a decent distance away from him," said Andy, thankfully. "A fellow who is desperate enough to take the chances he did is likely to do almost anything."

Sam announced dinner. Joe wished to

complete his watch at the controls, so Andy ate first. Sam had served the chile con carne and the hot tamales and watched Andy with amusement as the boy put the first forkful of the concoction into his mouth. Scalding tears came to Andy's eyes. It seemed as though his mouth were full of liquid fire. He gulped and swallowed hastily. Sam, who had been eating the stuff with every sign of enjoyment, pretended astonishment as Andy pushed his plate away.

"What's the matter, Andy?" he asked. "Too hot for you?"

"I'll say so," said Andy. "What else is there to eat?"

"Too hot for me, too," announced Sonny.

"I thought it might be," grinned Sam, "so I have a cold roast chicken for you to pick at."

Just as they were polishing off a leg bone apiece, Joe came into the living room.

"Something ahead of us looks like a fire, Andy," he said. "Better take a look at it."

The entire crew stampeded into the darkness of the control room and lined up at the

forward window. Far, far ahead, there was a dull red glow in the sky. As they watched it, it brightened to a vivid crimson, then dulled again to a deep rose.

"Looks like a ship on fire beyond the horizon," said Andy after a moment.

He stepped to the throttles and opened the four engines wide. The pointer on the dial of the air speed meter vibrated and swung up to one hundred and twenty-five miles an hour.

"Sonny," snapped Andy. "Get busy on your radio and see if there are any S O S messages coming in."

The boy dashed out of the room. Andy, Sam, and Joe stood watching in silence as the crimsoning patch on the horizon ahead flared up and again became dim.

"Whatever it is," said Sam, puzzled, "it must be a powerful big blaze. We're flying at four thousand feet and making better than two miles a minute. If it's a ship, we ought to be reaching it before very long."

The ominous glow in the sky was expanding and growing in brilliance. Otherwise it

seemed as far away as it had been when they had first seen it. It glowed and flickered, mounted and subsided, as though new fuel were being added to the flames and being instantly consumed.

"I just can't get a thing," complained Sonny, entering. "I've never known the static to be so terrible."

"That fire is too big to be a ship," said Andy at last. "And it's taking us too long to get to it. How far are we from land?" He stepped to the chart board and studied the penciled line which represented the *Apex's* course through the air. Then, after a moment of calculation, he answered his own question. "Twenty or thirty miles. We'll be there in ten or fifteen minutes. The size of that blaze looks as though a whole city must be burning up."

Joe leaned over Andy's shoulder studying the chart. Then, suddenly: "Sonny, what did you say about a volcano, a while back?"

"I exchanged a few broken signals with an amateur in Guatemala," he replied. "He said there had been about a dozen heavy

earthquakes this afternoon and that there were signs of activity from Mount Something-or-other. I didn't catch the name on account of the static, but he said something about a volcano."

"That's it!" exclaimed Joe, pointing to a spot on the map not far from the boundary line between Mexico and Guatemala and about an equal distance from the coast. "Look! 'V-O-L.' That means volcano. This whole chain of mountains here is full of 'em. There's one straight ahead of us, just where we're heading and just about where that fire is coming from. There it is on the map. 'Volcano Santa Maria.' "

"That's just what it is!" agreed Andy excitedly, glancing from the map to the compass and to the vivid crimson glow ahead. "It can't be anything else!"

Now they could see that the source of the flames came, not from beneath the horizon, but from a point high above it. Even as they stared ahead they saw a bright stream of fire dart high in the air, reflected in scarlet illumination against the lower edges of

a bank of clouds directly above the black outline of a mountain range.

"That's what fooled us," said Sam. "There are mountains between us and the volcano. Boy, howdy, that's some little eruption!"

In speechless amazement the crew of the *Apex* crowded around the windows watching the glowing colors in the sky change from cherry-red to scarlet, then to pink and to cherry-red again. Now the inky silhouette of the nearer mountains became visible, the rugged cordilleras that form a part of the great Andean chain which extends all the way to Cape Horn, four thousand miles to the south.

Andy slipped into the pilot's seat and sat there tense and alert, ready at any instant to take the controls away from "Iron Mike." They were still many miles away from the erupting volcano, but the brightness of the sky outlined the jagged sky line in a magnificent and awe-inspiring silhouette. There were no stars now. The entire sky was covered by a thin veil of pink cloud.

The *Apex* roared across the coast line. The spouting flames from Santa Maria were blanketed by the walls of the nearer mountains which rose in a black-and-crimson outline far above the airplane and its silent crew.

Andy cut the switch controlling the gyroscopes and turned the ship's bow away from the mountains. Then, beginning to climb, he headed out to sea in a great sweeping circle.

"I'd like to get close enough to see that volcano," he said. "But I'm not much for flying through these mountain passes at night."

As the *Apex* mounted to six thousand feet, then eight and twelve, Andy and the others caught occasional glimpses between other peaks of the distant crater of Santa Maria. It was an unforgettable sight. It seemed to be pulsing with uncanny regularity. For a few moments there would be merely a dull glow in the clouds that hung over the volcano. Then, like a mighty Roman candle, the crater would belch yellow and scarlet

flames hundreds of feet into the air, after which it would settle down again to gather energy for another eruption.

At twelve thousand feet they had reached an altitude equal to that of the volcano itself. Then, in the next five hundred feet, the *Apex* became enveloped in a thin cloud, smelling faintly of sulphur, which set the crew to sneezing violently. Andy hastily dived, driving the monoplane down to ten thousand, where the effects of the cloud disappeared.

"Sweet sister!" muttered Sam. "We must be fifteen or twenty miles from that smoke pot and yet we sneeze! Imagine what it must be like close to it!"

"Do you suppose there are any people on the ground near it?" asked Sonny, in awed tones.

"I don't know," replied Andy. "If it were a little lighter, we might take a chance of flying through the passes and scouting around as near to the volcano as we could. But it's too dangerous at night. We can't fly above all the mountains on account of that sulphur smoke. It might knock us all

out when we got closer to the volcano. And we don't know our way through the passes. The first thing you know we'd pile up on a mountain. Best thing we can do is to cruise around here to-night and have a look around in the morning."

He throttled the engines down to idling speed and sat back in his chair, steering easily, almost automatically, watching for the next glimpse of the cone when the *Apex* would pass an intervening mountain which blocked the view. Suddenly the ship plunged headlong into a dense black cloud. Instantly Andy whirled her around upon her wing tip to escape. The cabin became unbearably hot. Sulphur fumes filled the control room. The boys choked and gasped for air. Tears streamed down their cheeks. Their throats felt raw. Each breath tore at their tortured lungs. Scotty, on the floor, coughed and whined piteously. And then, as suddenly as they had entered the stifling cloud, they burst out into the cool, sweet air.

"Wow!" wheezed Andy, wiping the tears from his eyes. "We mustn't do that again.

If we'd flown through that long enough, it would have killed us all!"

Joe, sneezing and scarcely able to breathe, took a pencil from the chart board and marked a danger line on the map.

"The wind is blowing from the east," he said hoarsely, "so we must keep away from the western side of the volcano. That cloud of smoke is probably drifting fifty miles out to sea."

"We'll just coast along here, back and forth, for the rest of the night," decided Andy. "I don't dare cross the range in the dark to get on the easterly side of the volcano. We'll stay where we know we are safe."

So for the rest of the night the *Apex,* under throttled engines, flew back and forth along a fifty-mile patrol, waiting for the dawn to break over the mountain peaks. The fury of the volcano increased as the hours dragged by. Bursts of flame came at ever lessening intervals and seemed to shoot higher and higher into the crimsoned sky. None of the crew wished to leave the

control room and miss one instant of the magnificent and terrifying spectacle, so they remained together in the darkened room gazing across the red-and-black shadows toward the fire mountain thirty miles away.

Of the entire crew, perhaps Sonny Collins felt the least contented. Whenever there was anything wrong with his radio set Sonny was worried. A dozen times before midnight he went into his room and clamped on his ear phones, only to remove them instantly, almost deafened by the roaring and frying and hissing of static. In the hope that his own messages to the north might be heard above the static level, he cut in his quenched gap set and again and again hammered out a report of the *Apex's* position in the air. But there was no way by which he could know whether the signals had been received or not. He just had to hope for the best.

Sam Allen was in high good humor but as restless as a cat on a hot stove. Twice during the night he enlisted Sonny's aid and prepared huge plates of sandwiches and

steaming pots of coffee which they carried out into the control room and passed to the hungry crew. At midnight, and again just before dawn, he clambered out on his narrow catwalks to fuss over the engines for half an hour at a time after earnestly beseeching Andy not to fly into any clouds, sulphurous or otherwise, while he was outside.

Andy and Joe took turns at the controls, flying the ship back and forth in long, slow legs of a triangle. Now and then for brief intervals they switched on "Iron Mike" to handle the ship for them and lounged, resting, in their seats, watching the leaping fires in the sky as the *Apex* droned over beach and ocean. It was a night that none of them would ever forget.

CHAPTER XII

THE DOOMED VILLAGE

Dawn came with tropic speed and violence, painting the flame-shot smoke clouds with a thousand colors which changed with each passing instant. The mountain range, which during the night had been etched in a red-and-black half-tone, now became a solid gray mass of heaped-up rock. And the volcano became a living menace instead of a gorgeous bit of scenery as unreal as a painted postal card. Great billows of steam, gas, and smoke were pouring out of its crater and rolling slowly to the westward, while from the under side of this smoke pall rained ashes, cinders, and white-hot stones in a thick, impenetrable shower.

To the eastward the green valleys sparkled beneath a hot sun. To the westward, in the shadow of the smoke-cloud, the earth was in darkness, a horrible gray darkness that

was far more fearsome than the night. The four flyers stared at the scene in amazement. Its horror unfolded itself with the coming of the day. Until then it had been merely beautiful.

Andy, at the controls, turned his ship to the northward and began to cut in over the land in a tremendous sweeping curve. Tiny native villages slid beneath the broad wing of the monoplane, their little pink, yellow, and white houses, with grass-thatched roofs, looking toy-like and unreal. Great mountains extended to right and to left, many of them festooned by swiftly dropping rivulets and waterfalls. And in the valleys was a jungle of the brightest green foliage the boys had ever seen. The matted underbrush quivered in the early morning heat as if it were being fanned by a gentle breeze. The volcano was hidden behind the mountains on the left. Everything looked peaceful and calm, as though the land had looked like that for a million years and would not change until the end of time.

And then the *Apex* swept around an out-

jutting mountain. There was the volcano, looking not very high from this side. Its top was covered by a cloud of dirty yellow smoke, through which an occasional stab of crimson flame appeared. The pall of dense black smoke, which during the night had streamed off to the westward, was now drifting around to the south, casting a tremendous inky shadow over the land which seemed to blot out every ray of the sun.

Now for the first time the flyers caught glimpses of the frightful havoc caused by the volcano during the night. They gazed down at the swiftly unrolling panorama, aghast at what they saw. Just ahead of them was what had been, but the day before, a fertile valley planted in coffee trees. Now every inch of ground, every branch and twig of the coffee trees was covered with a thick layer of grayish volcanic ash which had drifted down during some change of the wind. Trees which had been thick with ripe coffee berries had been pressed flat to the ground with the weight of the dusty ash as, in the northern countries, a mighty oak may

be stripped by the weight of snow or sleet. Thousands of trees had been dragged down by the powdery substance; the rest were stripped skeletons, dead trees, utterly ruined.

Here, beyond the next mountain, was another valley, now an immense river of slowly moving mud which was bubbling out of the crater of Santa Maria and winding its implacable way along the valleys toward the lowland, sweeping everything ahead of it like an Alpine glacier. Ahead of it were coffee plantations, green grass, pleasant fields. Behind it nothing but a sea of hot, steaming mud. The cabin of the *Apex* grew uncomfortably warm as the great ship roared over it and a smell of sulphur spread through the ship.

As Andy banked the *Apex* to head toward the volcano itself the others stared, silent and horrified, at the scene that spread itself before them. Until now Santa Maria had been hidden from their sight, except for occasional glimpses of the cone through breaks in the mountain ranges. Now, as

the great monoplane roared up a mud-covered valley, the flyers had a magnificent view of one entire side of the volcano. From the crater itself belched fire, cinders, and sparkling stones which entered into the great canopy of smoke above and were seemingly held there, to fall to the ground on the other side, perhaps miles away. Like a perpetually bubbling fountain, great waves of boiling water and steaming mud gushed over the lower lip of the crater and tumbled down the mountainside, splitting into a dozen rivers of slow-moving muddy water which descended to overwhelm the valleys below. On the other side of the volcano everything was lost in that awful curtain of fire-shot black beneath the smoke cloud.

Above the roar of the *Apex's* four great engines the flyers became conscious of a sound like the purring of a tremendous cat. It was the volcano thundering and muttering in a vibration that seemed to shake the entire world. Now the acrid smell of sulphur was becoming unbearable. They could go no closer. At the very base of the fire

mountain Andy banked over hastily and retreated, cutting across the foothills to another valley to the southeast of the cone.

"Andy, look!" screamed Sonny, pointing straight ahead down the valley. "There are people down there!"

Directly beneath the shadow of the hurtling *Apex* was a steaming river of mud, moving slowly, relentlessly between the foothills of Santa Maria. A scant mile in front of it, surrounded by a ruined coffee grove, was a tiny village of pink houses, whose thatched roofs were covered deep with gray ash.

Beyond the village was another sluggish mud-river which had apparently begun to flow early in the night and had cut off the villagers from escape into the lowlands. Now a fresh flow of the boiling mud was slowly sweeping down upon them, threatening to engulf the village, even as a similar stream had overwhelmed the coffee groves in the next valley.

Andy pushed the nose of the *Apex* down in a headlong dive. Down, down, the great

ship dived, hurtling through the misty steam that was rising from the hot mud below. Now she was thundering past the first wave of the flowing mud. Andy glanced down at it. It was a solid wall of soft mud, at least fifteen feet high. It did not seem to be moving at all, yet in the single glimpse he had as he dived past Andy saw a whole row of coffee trees vanish within that front wall.

Now the pilot opened up his engines again and straightened out scarcely fifty feet above the doomed valley. The houses of the little village rushed toward the thundering plane. The boys in the control room could see men running back and forth along the single street, wading ankle-deep in soft, powdery ash that blew up like puffs of smoke beneath their footsteps. The heat was intolerable, the odor of sulphur sickening. The *Apex* droned over a house at the edge of the village upon whose roof five or six men were sitting staring as though dazed at the tide of mud that was slowly but surely sweeping down upon them.

Then the *Apex* had passed across the vil-

lage and was heading toward the mud flow which had cut the inhabitants off from the rear. Andy, his face very pale, studied the landscape to see if there were not some foot-path, some hidden way of escape for those whose homes would within an hour be lost beneath a dozen feet of mud. But, no; there was no way out. The little village and its coffee groves were part of a small island cut off on every side by mud or boiling water. Unless something were done immediately, those helpless people would be lost.

Andy glanced at his companions. Their faces, too, were strained and grave, their eyes darting from village to mud flow. It was quite clear that they had sized up the danger, too.

"What do you say, fellows?" shouted Andy above the roaring of the engines and the deep purring of the volcano. "Shall we try it?"

Joe pointed down toward a grove of very young coffee trees, now bare skeletons whose berries and leaves had been stripped off by the ash.

"Might be able to land there," he said quietly.

Sonny's brown eyes behind his great horn-rimmed spectacles met Andy's, steady and unafraid. The younger boy nodded silently. Sam rose and turned toward the door.

"Better get close to my engines," was all that he said.

"Sonny," said Andy, "beat it to your radio. Send messages outside telling the world there may be a lot of people killed in these valleys. They need all the help they can get. Say that we're going down in a valley six miles southeast of the crater to take out the people if we can. That's all. Never mind trying to receive anything through the static. Just send and send. And put your 'chute harness on before you sit down. Beat it now, old-timer."

The boy left without a word. Andy did not envy him the work and hated to sentence the youngster to sit there alone in his little cabin, not being able to see what was going on and not knowing what was happening to

the *Apex*. Sonny had flown enough to know that this descent into the valley was frightfully hazardous, and that trying to take off again with an extra load of passengers looked like one chance in a hundred of success. But Sonny was a good soldier. Andy had never known him to complain.

The narrow valley, fortunately, faced into the wind. But if the ground were soft, or rough, or the trees high enough to scrape the wings of the *Apex,* the plane would be lost. Now to find a bare spot wide enough to accommodate the widespread wheels of the great ship. Andy flew low over the coffee grove, trying to forget the villagers, trying to forget the deafening vibration of the volcano, trying to forget everything but the immediate job of landing the plane and the future job of taking her off with an extra-heavy load. Here was a place where the wheels might fit. There was a heavy coating of ash over the ground, but it was powdery stuff and might not trip the landing gear and cause the heavy *Apex* to somersault.

"Joe," snapped Andy, "pull the dump valves of the two outer wing tanks. We'll have too much weight to take off."

Joe leaned forward, selected two of four handles that projected upward from the floor and jerked them open. Andy knew that that act would prevent them from flying back to Mexico City, but that was not important now.

At the end of the grove Andy steered across the tiny village. Now the people were standing still in the street staring up at the giant plane which was making as much noise as the volcano itself.

"Wave back toward the grove, Joe," called Andy.

Joe stood at the window pointing in the direction of the ash-covered grove. The men down there were Indians; there was no telling whether they would understand or not. Now the plane was over the oncoming river of mud. Andy banked over it, staring down at its smooth, steaming surface. If his engine should stop now——

Back, then, flying down-wind, away from

the volcano, to turn half a mile above the young grove and to coast down to attempt a landing. Andy's pulses pounded fast as he closed the throttle and nosed down in a thin glide. If the ground beneath that covering of ash should be soft, or if the ash should hide an uprooted tree to trip the *Apex's* wheels, it would be all over. He and his flying mates could only climb up on those roof tops with the peons and wait for that river of hot mud to sweep over them. What an end that would be for the world-famous *Apex* flyers!

As the roar of the four engines died down, the tremendous throbbing of the volcano blotted out all noises. It sounded like a thousand railway locomotives all popping off steam at the same time. It beat against Andy's eardrums and made them ache. Now the trees were coming closer. Andy's grip on the control wheel was as steady as though the big ship were flying through clear, untroubled skies a million miles from any danger. Joe was now sitting beside him, ready to help if needed, calm and ap-

parently unworried. He helped Andy by just sitting there close and companionable.

Up a little, to kill the forward speed. Must pancake this landing. Steady now! The trees seemed to grow in size, leaping upward the settling *Apex* as though to impale its lofty, tapering wing. Andy held his breath until he saw that the branches were not quite so high as the wing. Now, flying speed almost gone, the great ship was settling toward the gray, powdery ash. What was beneath? He'd know in a minute. The two fat balloon tires and the tail skid struck at the same instant. Andy's heart seemed to stop beating, daring not to start again until the ship's forward speed had been lost. Were she to trip and turn over on her nose, she would be drowned in the mud within the hour. But, no; she rolled heavily to a stop amid a whirlwind of blowing ash churned up by the slowly kicking propellers.

"Nice work, old man!" said Joe quietly.

Andy glanced at him and smiled wryly.

"The job will be to get her off again with

a full load," he said. "I'd hate to have the wind change right now."

Joe's clear gray eyes went to the fiery crater of Santa Maria and to the horrible-looking pall of nightmare smoke that drifted off to the southward. But when he looked at Andy he was grinning.

"Keep your fingers crossed," he said. "Andy Lane luck has carried us through many a rough spot."

CHAPTER XIII

A DESPERATE CHANCE

ANDY jammed the engines and swung the *Apex* around, tail to the wind, then taxied slowly, carefully, to the lower end of the ruined grove to give himself as much room as possible for the take-off.

The natives of the village were dashing across the dust-covered grove, looking very colorful in their bright shirts and wide straw hats. But at the moment none of the flyers was interested in color or scenery. There were nearly twice as many people to be rescued as could possibly be taken from the ground.

As Andy again turned the *Apex* to head into the wind, Sam Allen, with a heavy service automatic in each hand, opened the cabin door and leaped down to the ankle-deep ash, which rose in a choking cloud about his head. He sneezed lustily and glanced

through watery eyes toward the wall of mud just on the outskirts of the village. Then he turned toward the racing natives, who had almost reached the side of the plane.

"All aboard," he shouted, waving toward the open cabin door with one of the automatics, "but don't crowd. We can take just ten of you on this trip. Then, if we can take off, we'll try twelve next time."

There were twenty-two of the Indians, each of whom was trying to beat the rest to the door. The first reached Sam's side and leaped for the sill, but was immediately swamped by the rest, who pulled him down and began to climb over him.

"Get out of there, flat-face," roared Sam, plunging through the mass of tangled arms and legs toward a burly Indian who was delaying everything in his efforts to be first aboard. "Just for that, you're last in line! And be good, or I'll crown you Queen of the May!"

A knife glittered in the Indian's hand. Sam ducked, seized the man by the scruff of the neck and the waist and threw him

like a sack of potatoes to the outer edge of the crowd.

Sonny and Joe appeared in the cabin doorway. Sam, perspiring freely, his face plastered with gray ash, stuffed his two automatics into the pocket of his coveralls and began to throw the Indians, one at a time, toward the two in the doorway, who grabbed them and pushed them out of the way within the living room.

The noise was terrific. All the Indians were talking at once, the four Diesel motors were kicking over and, above everything, was the unending purr of the volcano.

"—eight, nine, ten!" counted Sam. "That's all for this trip, boys. We'll come back for the rest of you later."

He pushed the remaining Indians out of the way and reached for the door handle. What he had said to the panic-stricken natives meant nothing at all, but his actions were unmistakable. They broke into a babel of cries, shrieks, and yells, pointing toward the slowly advancing wall of steaming mud and at a house just on the village's edge,

which was at that moment disappearing within that rolling tide. Two peons, whose bronzed faces were crazed with fear, grabbed at his arm, gesturing toward the cabin.

"Beat it, big boys, or we'll never get away in time to come back after you," shouted Sam, forgetting that they could not understand a word he said.

"Hurry up, Sam," called Joe from above. "Andy's waiting."

"Beat it! Alley oop! Vamoose!" yelled Sam impatiently, breaking away from the Indians' clutches and waving his arms at them. Then, with a tremendous heave of his broad shoulders he plunged straight into the milling, screaming crowd, toppling them over into the powdery dust like a dozen ten-pins. "Give her the gun, Andy!" he yelled, leaping for the door. "Papa's aboard!"

He slammed and locked the door, which resounded to the hammering of the disappointed peons outside, who thought they had been left to die in the onsweeping mud. Joe, who had been having troubles of his own with the peons who were herding about

in the cabin, ran through the corridor to the control room and slipped into the seat beside Andy.

For an instant it looked as though the peons within the plane were about to follow him in spite of Sonny, who with his back to the corridor was pushing against them with all the strength of his slender body. But the ignorant natives were almost as frightened of the vibrating monster in which they had been inclosed as they were of the more familiar peril of the volcano. Before Sam was able to shove his way through their massed ranks it looked as if they would stampede forward and overwhelm Andy in sheer panic.

But suddenly there came a deep-voiced snarl from beside Sonny. Scotty, the white hair on his neck standing on end, his teeth drawn back in a wolfish grin, was creeping along the corridor, his body poised for a leap at the throat of the nearest Indian. This was an immediate danger that the stupidest of the peons understood. They hesitated for an instant, staring down at the

oncoming dog, and in that instant Sam had reached Sonny's side and had blocked the entrance to the corridor with his ample form. Scotty edged in between Sam and Sonny and stood there trembling with eagerness for a fight, snarling his defiance of these strangers who had invaded his aërial home.

Then there was a new distraction. The four great motors burst into life and the plane began to rock and sway across the ground.

"Sit down, you birds!" roared Sam. "Can't have you racing back and forth. Might mess up the take-off."

The Indians stared at him questioningly.

"Sit down, Sonny, quick!" snapped Sam.

Sonny sat down instantly. Sam reached for the nearest Indian, tripped him in the wink of an eyelash and sat him down facing Sonny. Another Indian suddenly felt his feet snap out from under him and sat down with such force as to lose the breath he was saving to complain with. Then the others got the idea. First one, then another sat down hastily as Sam's long, husky arms

reached for them. In a dozen seconds the entire passenger list was squatting on the floor, where any rocking or pitching of the ship would not hurl them about and thus upset the balance of the plane.

In the control room Andy and Joe sat silent, their eyes fixed ahead upon the skeleton-like coffee trees which were racing toward them with the speed of express trains. The *Apex* roared ahead toward the village which would shortly disappear forever beneath the slimy river of mud. The tires were hammering the soft ground with pile-driver blows. Andy held her nose down, fighting for every last inch of flying speed before the moment when she would have to rise or crash. Perhaps she'd take off now; he dared not risk it. She'd lose flying speed and precious distance regaining it. It was too late to cut the engine now. She'd roll right into a little rivulet of sticky mud which was crawling out ahead of the major stream. She'd have to make it or crash. Even a blown-out tire would be fatal. The mud was reaching out for the wheels.

Now! Andy's breath hissed through his clenched teeth as the ship leaped into the air. The hot, sulphurous mist from the sweeping stream of mud obscured the windows for an instant, then cleared away in the wind blast. The *Apex* was flying, her wheels a full twenty feet above the poisonous river which was blotting out the village.

A long ridge of the mountains projected in front of the speeding plane. Andy dared not bank properly to avoid it. He skidded the ship around, following the curving path of the mud stream, and then began to fight his way up to safety.

"Did you see any landing place as we flew in, Joe?" asked Andy, not taking his eyes from the dangerous route ahead.

"Six or seven miles back," replied Joe, "just before we rounded the last mountain, there was a place you might put her down. None too big, but we'll have to hurry to get back if we're going to save the rest of that mob."

Andy nodded grimly and turned the plane in the direction whence they had come from

the night's vigil over the sea. Little by little the *Apex* was climbing, but her flying was sluggish, totally unlike her movements before the Indians were taken aboard. She had almost a capacity load. What would she do with two more passengers added to her cargo?

"Joe," he said. "You'd better go back —get Sonny to help you—and clear all the supplies out of the stock rooms. Throw everything overboard we don't absolutely have to have. We're going to have from two hundred and fifty to three hundred pounds more load on our next trip, and if that mud keeps on moving, not so much room to take off in."

Joe rose instantly and disappeared.

The *Apex* thundered across a mountain stream which but a few minutes ago had been racing unobstructed through the valleys toward the Pacific. Now, since the monoplane had last flown over it, a snake-like river of mud had curled down from the volcano and dammed the rushing waters. Already a great lake had been formed which

threatened to overflow into a valley to the north and flood miles of prosperous coffee *fincas* which had until now suffered little damage from the eruption.

There, around the next bend, was the patch of level ground which Joe had suggested as a landing place. Andy looked at it doubtfully. It was little more than half a mile long, roughly triangular in shape and narrowed to a V-shaped end which led through a narrow pass between the mountains. The wind blew across the strip of land at right angles, thus adding to the difficulties of landing and taking off. In anything less than a supreme emergency Andy would never have considered risking his plane in such a spot. But with a dozen lives depending upon a quick return to the doomed village there was no choice. At least the place was safe from the volcano. If he crashed there, any survivors of the wreck would not be drowned in boiling mud.

He whirled the *Apex* around over the shoulder of the mountain, lifted the right wing high in the air, and cut the engines.

The great ship slid down in a sickening side-slip, drifting in toward the tiny funnel-shaped valley at the point where it began to widen out into an emergency landing place. The mountain on the left began to swing in toward the lower wing. Deftly Andy jazzed the engine, raised the left wing and slipped down toward the right, missing the jagged crags and ledges by such narrow margins that twice his muscles tightened, waiting for the crash. The engines thundered again, then died down to a mutter. Rocking under the puffy side winds, the *Apex* floated gently down over the landing place, bounced her wheels against an uneven spot of ground, then settled to earth in a rough but adequate landing. Andy swept the throttles open and drove the ship to the farthermost end of the triangular field, shut off his left-wing engines, and swung the *Apex* around ready for the take-off.

He could hear Scotty barking angrily in the main cabin. Sam's shouts and the babel of strange voices echoed through the cor-

ridors. The purring of the volcano was constant, vibrating through every other sound. It rose and fell, but never died out. Andy was becoming as accustomed to it as to the unceasing roar of his own engines during a long flight.

"All right, Andy, old top," came Sam's cheerful voice. "Our passengers are gone. Let's be off. Joe and Sonny are breaking my heart by heaving out all the things I've so carefully stored aboard."

Before he had finished his sentence the four engines thundered again and the *Apex* trundled ahead. She was lighter now, and more responsive to the controls. Her tail rose immediately, and like a thing alive she hurtled toward the narrowing mouth of the pass. Sam, standing at the control-room window, stared straight ahead, watching the two mountains close in on them like the jaws of a trap. But if he was worried, he made no sign.

The wheels left the ground, hovered a scant foot above the surface for fifty yards, then rose almost vertically as Andy pulled

back upon the controls. The mountainsides seemed to drop out from under the wide tapering wings, the valley below to shrink to the size of a corridor.

"What it takes to make a flyer, Andy," said Sam, feelingly, "you're just full of. Four dollars against a soup bone you could land this crate on the top of the Chrysler Building and never crack a strut."

"Wait till we get the rest of those natives out before you shout too much," replied Andy grimly.

"Boy, howdy," whistled Sam as the ship roared around the nearest mountain, "look at the smoke from that volcano now!"

Andy looked. His heart sank like a stone. The wind was shifting and that inky black flame-shot smoke cloud was slowly veering around toward the east. Had it blown across the little village? If so, every man there must be dead. From the under side of that black pall rained white-hot sparks, molten lava, and glowing stones. Nothing could survive that shower of death. Yellow-

green vapor drifted through the blackness, incandescent by contrast with the utter darkness of the cloud behind it.

Below it the earth was invisible, swallowed up by that canopy of gas, smoke, and fire.

"Great stuff if we can't take off and that cloud blows over us," commented Sam. "It'll be a race between that river of mud and the smoke to see which gets us first. Step on the throttle, old dear. Let's not tarry overlong."

Now the ash-covered village was visible. The sun was obscured behind the smoke cloud. The whole valley was in twilight. But the village had shrunk in size. Nearly every house had disappeared within the smooth, snake-like river of mud, which was swallowing up the last few little dwellings as the *Apex* hurtled around the shoulder of the mountain.

"Yes, sir, the wind's changing, all right," murmured Sam. "And all it has to do is to change a couple of points more and we'll be

as neatly broiled as a flock of chickens on a spit."

"Get the gang aboard as fast as you can," said Andy, glancing at the smoke cloud. "A few minutes one way or another may tell the story."

CHAPTER XIV

IN THE SHADOW OF THE FLAME CLOUD

WITH her four motors wide open the *Apex* plummeted down toward the ruined coffee grove, spun around as though her right wing were attached to a pivot, and swooped in for a landing. Everything looked as though it had been tinted a yellowish green. The sun, hidden behind the long banner of smoke, was completely eclipsed. The endless layer of volcanic ash which covered the ground looked as though it had been dyed green. So did the figures of the dozen waiting natives who, huddled in a terror-stricken group amid the coffee trees, stared up at the oncoming plane, their only hope of rescue. Andy's mouth became very grim as he saw that the advancing river of mud had already blotted out the farther end of the grove. A heavier load and less room for

the take off! An almost hopeless combination!

Amid a smother of whirling ash the *Apex* made a perfect three-point landing. Again Andy wheeled her around and taxied her to the extreme lower end of the grove. The Indians came streaming across the little field, their brown faces alight with hope. Sam disappeared from the control room. Andy sat perfectly still, his eyes darting from the ever advancing mud wall to the veering smoke pall that threatened to sweep overhead with every new breeze. The green haze that spread over everything was heavy with the smell of sulphur; the air was as hot as the open mouth of a furnace. Not a mile away the whole land was being deluged with boiling water and white-hot stones which rained from the smoke cloud.

Andy clogged his feet on the floor impatiently. Why didn't Sam hurry? The mud wall was like a fifteen-foot fence at the end of the grove, a tall fence which was constantly advancing and making the task of taking off more impossible with every sec-

ond that passed. Where were Joe and Sonny? Scotty was barking again. The whole place was filling with the sound of voices and with the constant, never ending thunder of the volcano. Why didn't they all hurry? That wall of raining fire *was* closer. A moment ago it was behind that rocky ledge. Now the ledge had disappeared. It was growing hotter and hotter in the control room, too, and the sickening stench of the sulphur was almost unbearable.

"Let's go, Andy!"

It was Joe, calm and confident, slipping into the pilot's seat beside Andy. The boy slapped the throttles wide open and felt the plane lurch heavily ahead. How heavy she was! Andy could feel the weight of her in her response to the tremendous thrust of her four whirling propellers. Slowly she rolled over the uneven ground while Andy sat on the edge of his seat to urge her forward.

That great wall of mud seemed mountains high. How could he ever hope to pull her over that? And the curtain of fire; that was

closer, too. He suddenly noticed that he would have to find a new pass between the mountains if, indeed, he got the *Apex* into the air at all. The fiery shower had already cut off the valley between the mountains which he had used on the last take-off. The boy had the feeling that he was trapped in a box the sides of which were slowly pressing in on him.

It seemed hours and hours before the plane's tail lifted off the ground. The wall of flowing mud was racing down on the *Apex,* ready to suck her into its soft interior. Fifteen feet high. Might as well be a mile!

The wheels stuck to the ground as if they had been glued there. It was a fearful temptation not to try to jerk them off. How close the mud wall was! In another split second it would be too late.

Andy gritted his teeth and pulled hard back on the wheel. The *Apex* lurched off the ground, fought her way up above the soft fluid of the mud, and then seemed to hang there, as though she were tired, too

tired to fight her way upward another foot. Andy saw the slimy gray mass just beneath the wheels, felt the great plane sag wearily. Swiftly he pushed down on the controls; jerked them back again just before the balloon tires buried themselves in the mud. For a dozen heartbreaking seconds he teased the ship along in the air, fighting to hold her up, somehow keeping those wheels out of the muck by scant inches. He lived a lifetime in those seconds, hardly daring to hope that she would make another yard before pancaking down through those all-important few inches.

"Nice work, kid!" came Joe's even voice.

Andy heard him and was grateful. It had seemed as though he had been all alone there in the control room, fighting it out against all the forces of nature. But Joe was there, too, ready to lend a hand when he was needed.

Up another inch and still another. The mud wasn't so close to the wheels now. But straight ahead was the curving, rising, narrowing floor of the valley, cut off at the

upper end by that curtain of fire which no plane might touch and live.

Straight ahead roared the *Apex,* with the two walls of the mountains closing in upon her. There was not room for a vertical turn here, nor enough lift to the plane for an Immelmann. Nothing to do but to fly straight on until the last minute and then try whatever might have the best chance to avoid that pall of deadly smoke, gas, and falling fire. Up, then, little by little, with the mountains ever pressing in on the wings and the river of hot mud which covered the floor of the valley rising almost as fast as the plane. It was dark in here, as dark as twilight in the north. No ray of sun could penetrate that cloud of death. Up, a little more, now swerving to right and to left to follow the valley and to avoid those mountain walls that seemed to reach out for the wing tips. The heat and the sulphur fumes were almost overpowering. Andy heard himself gasping for air.

"Steady, old man!" said Joe, his voice incredibly calm.

There was friendship in that voice. Andy, his eyes set straight ahead, tried hard to grin in reply, but his lips felt thick and stiff. He heard himself counting—counting the seconds that could elapse before he would have to turn the *Apex* within that narrow trough of a valley or plunge straight into that fire cloud ahead. One—two—three —four——

Now! Deliberately Andy pushed down on the wheel, diving through that precious forty or fifty feet that now stretched between the wheels and the mud below. He must have every inch to get flying speed for what was to come. Now! With all the strength of his sturdy young muscles he pulled the heavy ship out of her dive and back into a zoom. His eyes were almost blinded by the white light of the falling bits of stone and lava ahead. His skin seemed to blister in the heat thrown back from the windows. The *Apex* was screaming straight up toward the black ribbon of sky between the mountain tops.

Then he gave the wheel a tremendous

twist and jammed hard down on the right rudder pedal. Could she do it? For an instant the *Apex* trembled as though she would fly into a million pieces. The shrieking of the natives in the cabin came through the roaring of the engines and the vibrating drone of the volcano. Slowly at first, then with a rushing swoop, the nose of the great ship fell off and the tail snapped up. A blur of rocks and gray mountainside slid past the windows. Then Andy and Joe were looking down at the mud again and at the ash-covered valley they had just left. Up, then, on the wheel before she dived into the mud flow. Andy's back muscles stood out like whipcords as he pulled back on the wheel. He saw Joe's bronzed hands grip the dual control wheel for the first time. Together the two panting pilots pulled the great ship out of her dive.

"Let me have her, Andy," said Joe.

Good old Joe! Had left it all to the chief pilot, as a good airman should, but was instantly ready to relieve Andy, whose

strength had suddenly gone out of him like water from a sieve.

The *Apex* was climbing now as if she knew she was leaving danger behind. She was heading toward the blue sky beyond the smoke cloud, her mighty engines throbbing and pulling her slowly upward despite the heavy load in her cabins. The events of the past three quarters of an hour seemed to belong to some former flight, their details already blending into an indistinct impression in Andy's fatigue-drugged mind.

Joe was banking now, turning around the shoulder of a mountain. There, a half-dozen miles ahead, was the triangular-shaped patch of land where Andy had left the first of the refugees. It had seemed a difficult landing then. Now, after what they had just gone through, it seemed as easy as dropping the *Apex* into the Mineola airport. Joe closed the engines, sideslipped the huge ship, and then, with a deft flirt of the ailerons, flippers, and rudder, placed tail skid and wheels on the ground at exactly the same instant.

Sam's voice, shouting excitedly, filtered through the corridor.

"Outside, bums, outside, I tell you! We've given you a free ride and have saved your skins from a singeing, but don't hang around, you babies, don't hang around! Out! Can't you understand good English? Out! Vamoose, before I tear off a yard of your hides!"

Then Andy heard the cabin door slam. Sam's heavy tread was coming along the corridor.

"All set to go, boys and girls," he grinned. "I'm going to be lame for weeks. There was a big turkey-faced baby who wanted to kiss me, or something, and I nearly broke my big toe on him."

Joe opened up the motors.

"Where's Sonny?" demanded Andy.

"He's playing with his radio," laughed Sam. "After he and Joe got through working in the storerooms the kid took a fling at his set. It seemed to be on his mind. Then he found that the static was clearing up, and he's forgotten the entire world. He

doesn't know whether we're in the air or playing leapfrog over the South Pole!"

The *Apex* zoomed high into the air. Joe glanced toward the flaming mountain and banked away from it.

"I've seen about all the volcanoes I want for one hop," he declared. "I'm going to cut one big circle around the land down there to see if there are any more people caught by those rivers of mud. Then I'm all for making tracks away from here. What do you say?"

"Suits me," said Andy wearily. "Head straight back for Mexico City. Sam, better tell Sonny to have the refueling plane start this way to meet us. We'll need some more fuel oil pretty soon. And some food, too. Gee, I'd like a good meal!"

"And that's just what we're going to have," said Sam contentedly. "I'll have a look at the engines and then I'll show you a meal such as we haven't had since the last time we visited Paris."

"You're out of luck," replied Joe ruefully. "Sonny and I had to toss everything

in your storeroom overboard to lighten the ship."

"You didn't touch the room that had the engine spares and tools, did you?" demanded Sam.

"No," said Joe. "We thought we might need those. But we heaved everything else out that we could lay our hands on."

"It isn't such a bad old world after all," said Sam, grinning like the cat that swallowed the canary. "When I saw you going through those storage lockers like a vacuum cleaner, I thought I'd better do something to protect our next dinner. So I ducked into the pantry, took out a nice big steak and some potatoes and hid them in my machine shop. Now laugh that off, frozen face!"

"Those extra few pounds might have cost us the ship," said Joe, but his voice was not as angry as he tried to make it.

CHAPTER XV

ALL'S WELL

"IF I EAT one more mouthful of anything," groaned Andy, "I'll be as fat as Hungry Sam!"

He reluctantly pushed aside a well-scraped plate and grinned happily at the smiling faces of his three friends, who were all gathered around the ruins of what had once been a wonderful meal. Scotty, on the floor at his master's feet, snored contentedly, his chin resting upon a half-gnawed bone of tremendous proportions.

At an altitude of twelve thousand feet the *Apex* droned steadily northward over a glittering sheet of sapphire water. Beyond her right wing were the rugged mountains of Mexico. To the left the Pacific Ocean stretched out to a clean-cut horizon; beyond that lay China and the far countries of the Orient. Ahead and astern the sky was clear

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and bright. The smoke pall over Santa Maria had long since slipped beneath the horizon astern. The control room of the big plane was deserted, but the *Apex* moved as calmly on her course through the sky as though a human hand were upon her control wheel. The odd-shaped wooden box hummed and clicked, as "Iron Mike" steered the ship and kept her level in the air.

Sam, his face a picture of well-fed satisfaction, yawned and stretched luxuriously.

"Just think of all the high, wide and fancy eating we're going to do in the next week or so," he muttered. "A reception at Mexico City and then, as we swing southward again, another big chewing contest at Cristobal, in the Canal Zone, and—where else are we scheduled to appear, Andy?"

The young captain picked up a sheaf of radio messages which had been brought in by Sonny at the beginning of the meal. He thumbed through them rapidly.

"I don't know," he said slowly. "We've

had invitations to receptions in about every country in Central America. Those radio reports of Sonny's certainly got everyone all excited. You'd have thought we'd rescued a million people instead of just twenty-two. Here's a message from the President of Guatemala, another from the President of Costa Rica, another—oh, there are dozens of them! And the worst of it all is that here's one relayed down here from the Apex factory. Mr. Avery says for us to fly around to as many of these celebrations as we can. He says that ever since we began our long hops he's been promising the people of Central America that we'd visit them, and now we've got to keep his promise for him!"

"Perhaps," said Sam hopefully, "besides being able to eat good and hearty, we might be able to hang around down here until warmer weather comes at home. Boy, how I dread to go out and baby those engines in the winter time!"

"Listen, big boy," laughed Joe, "those engines have needed less babying than any

motors we've ever had. Never a miss out of them on the entire trip. I tell you, fellows, these motors and our old buddy 'Iron Mike' have had the test of their lives, and if the factory doesn't put them both into production and make a few millions out of them, Mr. Avery and Sonny's father are crazier than I think they are!"

"Sure they will," agreed Andy. "After the advertising this ship has gained on this flight, people will be ordering the Diesels and the gyroscope controls from all over the world. That will mean that the factory will make a lot more money and we, being stockholders, will get richer and richer. Can you beat that—making money for the fun we're having?"

"What time will we meet the refueling plane?" asked the practical-minded Joe.

"Before long," replied Sonny, rising. I've been exchanging signals with her for a couple of hours. I'll go in now and see if she's anywhere near."

"A month or so in this nice warm air," murmured Sam dreamily, "just cruising around and living the life of Reilley, and making a lot of money, and every now and then landing somewhere and eating a nice big meal——"

"Pipe down, Fatty," laughed Andy. "You're talking in your sleep. If you keep on being dizzy like that, we'll have to fly back north and go to work before you are so fat you'll have to lay down and roll to get from one end of the ship to the other. You won't be able to walk at all."

Sonny rushed into the room.

"Just got a hot message," he shouted. "That Russian, Borokoff, who gave me the nice solo ride, has been captured at New Orleans and is in jail!"

"Well, that's that," said Andy. "Glad he's off our minds."

"I'll tell the world!" agreed Sam, wholeheartedly. "I never knew when I'd open a door, or peep under a berth and there would be that wild-eyed Russian. Now we

haven't a trouble in the world. Fame, fortune, flying, fun——"

"—and food," Joe reminded him, mischievously.

"Yes, and food," added Sam enthusiastically. "What more could a gang like this want out of life?"

THE END

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